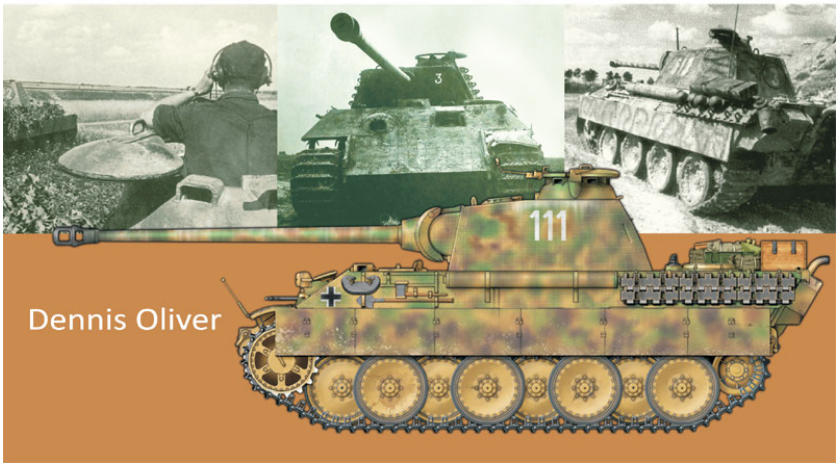
PANTHER MEDIUM TANK

TANK CRAFT

IV.SS-PANZERKORPS

EASTERN FRONT, 1944



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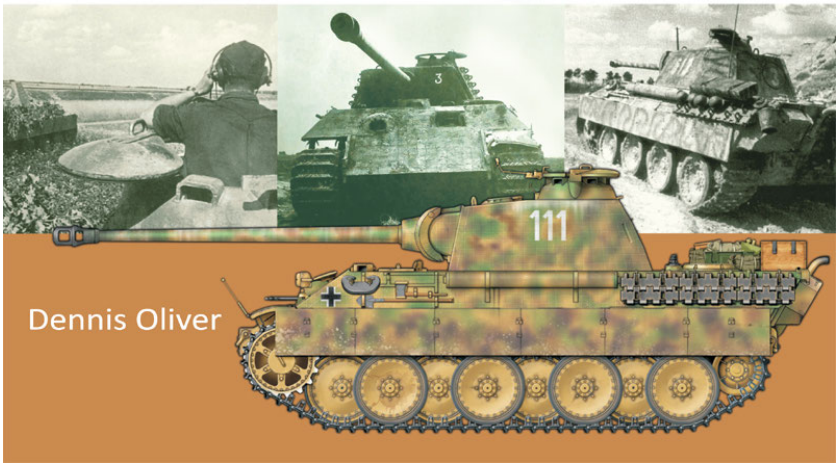

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A Pzkpfw V Panther ausf A tank of 5.Kompanie, SS-Panzer-Regiment 5 Wiking and Sdkfz 251 halfttacks of SS-Panzergrenadier-Regiment 9 Germania photographed in the countryside around modern-day Siemiatycze, east of Warsaw on the Bug River, in July 1944.

TankCraft 32

Dennis Oliver

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Front cover. At top: Dragon Models'1/35 scale Panther ausf A built and painted as a tank of 8. Kompanie, SS-Panzer-Regiment 5 by Theodores Kalamatas. The photographs in the centre depict, from left to right, Panthers of S.Kompanie, SS-Panzer-Regiment 5 photographed in central

Poland in August 1944, a Panther ausf A of SS-Panzer-Regiment 3, possibly 3. Korn pa nie, disabled during the fighting in late 1944 or early 1945, and a Panther ausfA of S.Kompanie, SS-Panzer-Regiment 5 in training at SS-Truppenubüngsplatz Heidelager in early 1944. The illustration at the foot of the page of a 1.Kompanie, SS-Panzer-Regiment 3 Panther ausf A is also shown and discussed on page 17 of the Camouflage & Markings section of this book.

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Introduction

Developed largely in response to the Soviet T-34 and KV series of tanks, the Panzerkampfwagen V Panther went into action for the first time during Operation Zitadelle on 5 July 1943 when Panzer-Abteilung 51 and Panzer-Abteilung 52, attached to 4.Panzerarmee, fought in the area north-east of Belgorod in western Russia near the present-day Ukrainian border. Referred to as Panzer-Brigade 10, the two battalions were coordinated by the headquarters staff of Panzer-Regiment 39 and the complete brigade was allocated 204 Panther ausf D tanks (1). In a rather inauspicious start, two vehicles were destroyed by engine fires before the assault began.

By 20 July 1943, when the offensive had ended and the German units were withdrawing to the defensive positions of the Hagen Line, a total of fifty-six tanks had been completely written off due to enemy action (2) while a further sixteen were so badly damaged that they had to be sent to Germany for major repairs. In addition, eighty-five Panthers were with the brigade's maintenance unit and would be inoperable for some time. For their efforts, the Germans were able to claim the destruction of 263 Russian tanks and over 100 anti-tank guns but this was a small reward for the price paid in material alone.

In fairness, most of the German losses could be traced to some kind of mechanical failure, problems which were to beset the Panther for most of its operational life, and these were largely due to the design being rushed into service. But it was considered that these 'teething troubles' could be overcome and there was no doubting the efficacy of the tank's 7.5cm L/70 gun which was capable, by the enemy's own admission, of stopping the strongest Soviet tanks at ranges of

over 2,000 metres. Despite the tank's obvious shortcomings it was decided to proceed with the plan that each Panzer regiment should eventually contain a battalion of Panthers and a further 1,035 tanks were allocated to operational units by the end of 1943. In August of the same year, just weeks after the type's operational debut, the first examples of the improved Panther ausf A model left the assembly lines at Maschinenfabrik Niedersachen Hannover (MNH).

The Panzer regiments of the two Waffen-SS divisions of IV.SS-Panzerkorps covered in this book were not of course the only units equipped with the Panther tank during 1944 but they operated all three main production variants of the Panther and were built, and sometimes reorganised, according to the changing tables of establishment introduced between 1943 and 1945. They also took part in some of the most important battles of the later war period, including the last major German offensive, and were in many ways typical of the armoured units which fought on the Eastern Front in the final months of the war. The misconception that Waffen-SS units were more lavishly supplied than their army comrades is very quickly dispelled when the allocation of new and replacement vehicles for SS- Panzer-Regiment 3 and SS-Panzer- Regiment 5 is examined in detail.

Some relevant information, particularly regarding modelling products, has already been mentioned in the earlier book in this series (3) and rather than repeat that here I have chosen to expand the Model Showcase and Technical Details and Modifications section.

A Partner ausf A tank of 6.Kompanie, SS-Panzer-Regiment 5 probably photographed in August 1944 near Maciejow in Paland. The pattern of camouflague made up of random lines of Rotbraun over a mottled base of Dunkelgelb and Olivgrün was typical of this company and further examples are shown on page 25 of the Camouflage & Marking section of this book.

Notes

1. These units and the actions in which they took part will be examined in detail in a forthcoming title in the TankCraft series, Panther Tanks: German Army Medium Tank, Eastern Front Summer 1943.

2. Seven had in fact been captured intact.

3. Panther Tanks: German Army and Waffen-SS Normandy Campaign, 1944, Panther Tanks: German Army and Waffen-SS Defence of the West, 1945 and Panther Tanks: German Army Panzer Brigades, Western and Eastern Fronts, 1944-1945.

THE EASTERN FRONT, 1944

With the end of the Second World War in 1945 and the dissolution of

the Soviet Union in 1991 the names of many towns and cities were changed and I have endeavoured to use those that readers may be familiar with. The names of almost all the towns and cities of East Prussia were changed and remain so to this day. As most readers will be familiar with the German versions I have used those here. The timeline on the following pages gives a brief outline of the fighting in the East through 1944.

1. The front line on the evening of Thursday, 21 June 1944just prior to the commencement of Operation Bagration. 2. By mid-August 1944 the Red Army had advanced to the Vistula and destroyed much of Heeresgruppe Mitte in the process. 3. The front line as it was on the last day of 1944. The rapid expansion in the south was due in large part to the surrender of Romania and Bulgaria. 4.30 March 1945. 5. 11 May 1945. The demarcation line agreed by the United States, Britain and the Soviet Union.

6 January 1944. Units of the Red Army cross the 1939 Polish frontier after advancing over 200 kilometres in just two weeks.

10 January 1944. Despite strong Soviet pressure, German forces in the Dnieper Bend manage to hold their positions.

13 January 1944. 1.Abteilung, SS-Panzer-Regiment 3, which is situated at Grafenwöhr in Germany, receives its first allocation of Panther tanks.

15 January 1944. The Russians launch a new offensive around Leningrad. Within days, the German garrison of Novgorod, south of Leningrad, is surrounded but manages to break out. Russian units enter the town on the following day. Heavy fighting rages around Vitebsk in the sector of 3. Panzerarmee.

26 January 1944. 5.SS-Panzer-Division, with units of the Heer, is encircled in a pocket centred on the town of Cherkassy on the Dnieper River. The headquarters element of the division 's Panzer regiment with its second battalion has been in Germany since December 1943, retraining on the Panther.

27 January 1944. The siege of Leningrad is officially lifted. The divisions of Heeresgruppe Nord fall back to the Luga River, about 70 kilometres west of the city. Elsewhere, Soviet units take Lysyanka and push on to Zvenyhorodka, south of Kiev, encircling 60,000 Germans in what would later be called the Korsun Pocket, 40 kilometres west of Cherkassy.

2 February 1944. German attempts to relieve the Korsun Pocket commence. The tanks of III. Panzerkorps and XLVII.Panzerkorps make some progress but are hampered by the deep mud which would come to characterise the operation.

6 February 1944. With forty Panther tanks on hand, II. Abteilung SS-Panzer-Regiment 5 begins gunnery training at Mailly-le-Camp in France.

7 February 1944. In the East, the commander of SS-Panzer-Regiment 3 reports that most of his tank crews are without vehicles. The regiment's l.Abteilung is still training in Germany.

8 February 1944. Russian troops enter Nikopol in southern Ukraine. On the same day the Soviet command offers surrender terms to the units trapped at Korsun which the Germans reject.

10 February 1944. The Russians attempt to reduce the Korsun Pocket by means of a massive artillery barrage. By the following day the relief force is less than 15 kilometres from the defensive perimeter.

15 February 1944. Hitler, who had previously called for the defence of Korsun and Cherkassy to be conducted to the last man, permits the German garrisons to attempt a break-out and approves a general withdrawal to the prepared defences of the Panther Line although the fortifications are only partially completed.

17 February 1944. German troops encircled in the Cherkassy Pocket, including elements of 5.SS-Panzer-Division, are able to break out but lose all their heavy equipment in the process.

18 February 1944. The divisions of Heeresgruppe Nord fall back to the line running from Narva to Oposhka. Along the Baltic coast

both sides are exhausted and settle into defensive positions. The survivors of 5.SS-Panzer-Division are transferred to Lublin, south-east of Warsaw, where the division is to be rebuilt.

4 March 1944. In central Ukraine, Red Army assaults against units of Heeresgruppe Mitte recommence and by the following day the Russians are pushing towards Uman on the Vinnitsa to Kropyvnytskyi road.

10 March 1944. Umanfalls to the Russians. After a brief but fierce engagement north-east of Vinnitsa, the last tanks and assault guns of 3.SS-Panzer-Division are withdrawn from the front.

15 March 1944. Red Army units break through the German defences and advance to the Bug River, the start line for Operation Barbarossa in June 1941.

Panther ausf A tanks and transport vehicles being unloaded in Poland in April 1945. Note the very neatly applied whitewash camouflage and S.Kompanie turret number.

The Panther ausf A of 8. Kampanie, SS-Panzer-Regiment 5 commanded by Scharführer Herberts which was disabled during the first attempt to break into Kovel on 29 March 1944. This photograph was taken when it was possible to recover the bodies of the German troops killed around the tanks who had been hastily buried as the fighting was taking place. The number 821 is clearly visible on the turret side.

18 March 1944. The units of ll.Abteilung, SS-Panzer-Regiment 5, training in France, are alerted to be ready for a move to the Eastern Front.

19 March 1944. Convinced that the Hungarian government is about to defect from the Axis cause. Hitler orders the occupation of Budapest. On the following day the Russians take Vinnitsa, on the Bug River in central Ukraine, at one time the site of the Führerhauptquartier.

25 March 1944. With the Soviets on the Czech border. Hitler is persuaded to allow the divisions of 1.Panzerarmee to abandon offensive operations and break out to the west of Lvov.

26 March 1944. On an 80-kilometre front Red Army units reach the River Pruth in eastern Romania and on the same day take

Kamenets-Podolski in what is today western Ukraine.

27 March 1944. The first elements of ll.Abteilung, SS-Panzer-Regiment 5 arrive on the Eastern Front.

29 March 1944. The tanks of SS-Panzer-Regiment 5 begin their attempted relief of the encircled German garrison at Kovel in what is today north-western Ukraine.

30 March 1944. Field Marshals Kleist and Manstein, the commanders of Heeresgruppe A and Heeresgruppe Süd respectively, are sacked by Hitler who blames them for the disastrous losses in the battles between Nikopol and Krivoi Rog along the western bank of the Dnieper River. They are replaced by Ferdinand Schörner, an ardent admirer of the Führer, and Walther Model. Obersturmführer Karl Nicolussi-Leck, with the remaining Panthers of 8. Kompanie, SS-Panzer-Regiment 5, breaks through the Russian positions around Kovel and enters the town. Nicolussi-Leck was later awarded the Ritterkreuz for his actions during the relief attempt.

2 April 1944. Trapped in the Kamenets-Podolski Pocket, the divisions of l.Panzerarmee are offered surrender terms by the Russians who publically threaten to shoot every third man taken prisoner if the terms are refused.

4 April 1944. A corridor is opened to the besieged units in the town of Kovel.

8 April 1944. The Russians reach the Slovakian border. The final Soviet offensive to retake the Crimea and destroy the 17. Armee begins. On the next day the survivors of 1.Panzerarmee, after breaking out of the Kamenets-Podolski Pocket, reach the German lines.

11 April 1944. After capturing Odessa on the Black Sea the Russians take Kerch in the Crimea. Hitler at last gives permission for a withdrawal to the fortress city of Sevastopol but many German and Romanian units have already been overrun.

13 April 1944. Over the next fortnight the Crimean towns of

Simferopol, Feodosiya, Eupatorio, Yalta and Balaclava fall in quick succession to the Red Army. Elsewhere, Tarnopol in the southern Ukraine is captured after fierce fighting.

5 May 1944. The Russians launch their first offensive against Sevastopol.

9 May 1944. Hitler orders the evacuation of Sevastopol. Later that day the Soviets announce that they have secured the city. The last German defenders surrender three days later.

31 May 1944. A German counterattack, aimed at halting the Red Army's push into Romania, is beaten back north of Jassy, modern-day Iasi on the Moldavian border. Desultory fighting continues here and in the north until early June but the Soviet main effort is being prepared for the summer which the Germans expect to take place in the sector of Heeresgruppe Süd.

1 June 1944. l.Abteilung, SS-Panzer-Regiment 3, training in Germany, reports that of its authorised allocation of seventy-six Panther tanks only five have been delivered.

22 June 1944. The Russians launch a massive offensive along a 600-kilometre front between Polotsk and Bobruisk, in what is today southern Belarus. Catching the defenders completely by surprise, the main weight of the attack is directed against Heeresgruppe Mitte which can manage to field just 900 Panzers against 5,200 Soviet tanks.

26 June 1944. Within days Hitler's headquarters is receiving reports of serious losses along the front of Heeresgruppe Mitte. On the following day, LXIII.Armeekorps is completely wiped out while trying to defend the town of Vitebsk.

27 June 1944. The Russians advance towards Mogilev, east of Minsk in present-day Belarus, and cross the Berezina River. The town falls on the following day, trapping the greater part of 9.Armee. Pushing aside the tanks of 20. Panzer-Division the Russian advance to Bobriusk.

29 June 1944. The Soviets take Bobruisk, just 80 kilometres

south-east of Minsk, capturing 70,000 German soldiers, mainly from XXXV.Armeekorps and XU.Panzerkorps.

1 July 1944. On the northern edge of Minsk, the town of Borisov falls to the Russians. On the following day, despite the efforts of 5. Panzer-Division, units of the Red Army cut the railway lines west of Minsk, threatening the city with complete encirclement.

3 July 1944. The Russians take Minsk. East of the city, in the pocket created by the Soviet advance, over 100,000 Germans are trapped.

4 July 1944. On the Baltic coast, the Russians launch an offensive toward Riga, capturing Polotsk and threatening to isolate the divisions of Heeresgruppe Nord which are fighting their way south through Estonia.

6 July 1944. Kovel, which had been taken at such cost in the spring, falls to the Soviets.

8 July 1944. South-west of Minsk, the defenders of Baranovichi surrender to the Russians. In Lithuania, infantry and Fallschirmjäger units conduct a house-by-house defence of Vilnius but are soon encircled. In the fighting around Maciejov, west of Warsaw, the Panthers of SS-Panzer-Regiment 5 claim the destruction of ninety-nine Soviet tanks without loss. Untersturmführer Grossrock, a platoon commander of ll.Abteilung, is later awarded the Ritterkreuz for the bravery and leadership he displayed in this battle.

9 July 1944. The Russians launch a major offensive towards Rezekne, east of Riga, with the intention of cutting off Heeresgruppe Nord.

12 July 1944. The tanks of 6. Panzer-Division attempt to break into Vilnius and succeed in opening a narrow escape corridor. Late the next day the Russians secure the city but many of the Germans trapped there manage to escape. In southern Belarus, a new Soviet offensive captures Pinsk on the Pripyat River on the first day.

16 July 1944. The Soviet encirclement of Brody in eastern Poland

is complete, trapping 40,000 men of XIII. Armeekorps and the division-sized Korps-Abteilung C. By the next day Russian units reach the Latvian border as Hitler announces that the Baltic States will be held at all costs.

18 July 1944. Advancing from Kovel, the Soviets push across the Bug River towards Lublin. In the north, scattered Russian units are fighting on Latvian territory.

20 July 1944. A group of disaffected Wehrmacht officers make an attempt on Hitler's life at his headquarters at Rastenburg in East Prussia.

22 July 1944. The German troops encircled at Brody are overrun. In Lithuania, the town of Panevezys on the Vilnius to Riga road falls to the Russians.

23 July 1944. The town of Pskov, on the southern edge of Lake Pihvka near the Estonian border, is captured by the Russians. Heavy street fighting is reported from Lublin in eastern Poland.

24 July 1944. Soviet units fight their way across the River San northwest of Lvov in what is today north-western Ukraine. The Germans begin evacuating the town almost immediately but are encircled by the end of the following day.

25 July 1944. In the north, German units pull back from Narva and take up positions along the Tannenberg Line. Soviet forces reach the Vistula River between Pulawy and Sandomierz, about 60 kilometres west of Lublin.

27 July 1944. In a single day the Russians take Lvov, Dunaburg and Bialystock and secure a major bridgehead over the Magnuszew River, which runs east of Warsaw. Within 24 hours several crossings are secured across the Vistula.

29 July 1944. Heeresgruppe Nord is cut off in Estonia and Latvia.

1 August 1944. The Russians take Kaunas in central Lithuania cutting all road links between Germany and the Baltic States. In the city of Warsaw the Polish Underground Army conducts

numerous attacks against the German garrison.

2 August 1944. Polish regular units, under Soviet command, secure a bridgehead on the western bank of the Vistula.

3 August 1944. Soviet spearheads in the area to the east of Warsaw are destroyed by German counterattacks undertaken in part by units of 3.SS-Panzer-Division and S.SS-Panzer-Division. The fighting in the city of Warsaw continues with the tanks of Panzer- Regiment 27 retaking the area around the Poniatowski Bridge. At least one of this regiment's Panthers was captured intact by the insurgents. On the next day the Russians succeed in creating a bridgehead on the west bank of the Vistula at Baranov.

7 August 1944. Soviet units reach the foothills of the Carpathian Mountain range near the Slovak and Hungarian border.

11 August 1944. The Russians break through the Mavlenburg Line defences near Pskov and push towards the Estonian border. German units mount an assault on the old town area of Warsaw.

14 August 1944. The Russians launch a major offensive from their Vistula bridgeheads. The only natural defensive barrier remaining between the Soviet forces and Berlin is the Oder River.

17 August 1944. Red Army units reach the borders of East Prussia. Further south the Russians complete the capture of Sandomierz.

18 August 1944. A Russian breakthrough near the town of Stanislawow, modern-day Ivano-Frankivsk in western Ukraine, is beaten back by the Panthers of ll.Abteilung, SS-Panzer-Regiment 5. The battalion commander, Hauptsturmführer Hans Flügel, personally leads his men into battle and is later awarded the Ritterkreuz for his efforts.

20 August 1944. Soviet units mount a major assault across the Romanian border. Within 24 hours the Romanian army defects and 6. Armee is trapped on the Black Sea coast. On the northern front a narrow corridor is opened to the encircled divisions of Heeresgruppe Nord.

22 August 1944. After holding out for almost three months, Iasi falls to the Russians. On the following day King Michael I of Romania officially allies his country with the Soviet Union.

24 August 1944. The Russians reach Tartu in Estonia but are held back by Waffen-SS units, including Estonian and Belgian volunteers, and the tanks of Panzerverband von Strachwitz.

A Panther ausf A, in the foreground, passing a Panther ausf G, both from 1.Kompanie, SS-Panzer-Regiment 3. This photograph was taken in the town of Siedlce, east of Warsaw, shortly after the regiment's Panther battalion arrived on the Eastern Front. Note the Totenkopf unit insignia and the triangle marking on the turret rear access hatch of the vehicle in the background. This may have been an identifying feature of 1.Kompanie. Tanks of this company are also shown in the Camouflage & Markings section on pages 17 and 18.

27 August 1944. The Germans are pushed out of Galati in Romania and within days the Soviets capture the vital oilfields at Ploesti and also enter Hungarian-occupied Transylvania. In Slovakia a popular uprising threatens the pro-German government.

31 August 1944. The Red Army takes Bucharest, the capital of Romania, and immediately begins reprisals against members of the pro-Axis government.

5 September 1944. A joint German-Hungarian operation launched near Klausenberg, today known as Cluj-Napoca, fails to halt the Red Army units advancing through northern Romania. By the next day the Russians have captured the Danube River crossing at Turnu-Severin, on the present-day Serbian border, and push into Yugoslavia.

12 September 1944. German and Hungarian units, including elements of4.SS-Polizei-Panzergrenadier-Division, conduct a successful counter-offensive towards Temesvar, modern-day Timisoara in Romania.

14 September 1944. Russian troops, fighting their way into Warsaw, reach the Vistula River bridge in the suburb of Praga, in the Baltic States, the divisions of Heeresgruppe Nord are forced to fall back to defensive positions around Riga.

15 September 1944. Soviet and Romanian units launch an assault on the town of Turda, 20 kilometres south of Cluj-Napoca. After securing the eastern suburbs they are pushed out by the last tanks of the Hungarian 2nd Armoured Division.

22 September 1944. The Russians occupy Tallinn and Reval in Estonia.

23 September 1944. In Romania, Russian troops capture Arad near the Hungarian border. Further south the Panzergrenadiers and remaining tanks of 23.Panzer-Division conduct a successful counterattack at Vaskapu and Sosfar on the Danube River. The German tanks push on to relieve the Hungarians fighting around Turda.

24 September 1944. With both sides exhausted, the Russian offensive in Baltic States comes to an end.

28 September 1944. The Red Army launches an offensive towards the Yugoslav border from positions in Romania.

2 October 1944. In Warsaw, the last elements of the Polish Home Army surrender after their food and ammunition runs out. Contrary to Hitler's wishes, Obergruppenführer von dem Bach-Zelewski, the German commander, orders that they be treated as regular prisoners of war. In Moscow, a secret Hungarian delegation is negotiating an armistice with the Russians.

5 October 1944. The Soviet offensive south of Riga begins along a 100-kilometre front, threatening to again cut off Heeresgruppe Nord in Lithuania. The main weight of the attack falls on the depleted 551.Volksgrenadier-Division which is almost completely wiped out.

7 October 1944. The divisions of 3. Panzerarmee under Generaloberst Erhard Raus fall back under the pressure of the Russian attacks north of Memel. During the next 48 hours Generaloberst Raus and his staff are cut off and are forced to fight their way through to Memel.

9 October 1944. While the remnants of XXVIIl.Armeekorps maintain a defensive perimeter around Riga, ships of the Kriegsmarine begin evacuating troops and civilians from the city.

10 October 1944. Russian units reach the Baltic coast near Memel, isolating Heeresgruppe Nord in the Kurland Pocket for the remainder of the war. The defensive line around Memel is supported by the powerful guns of the cruiser Prinz Eugen and other ships of the German navy.

11 October 1944. The Red Army finally secures Cluj-Napoca in Romania as ceasefire negotiations between Hungary and the Soviet Union continue.

13 October 1944. Russian troops enter Riga, the capital of Latvia, as the last units of Heeresgruppe Nord withdraw into the Kurland Pocket. Although the Baltic States are lost, the Germans manage to hold the Niemen Line defences covering East Prussia.

15 October 1944. Within hours of announcing his country's withdrawal from the war, the Hungarian head of state is taken prisoner by German commandos and a new government installed

which vows to continue the alliance with Germany.

16 October 1944. The Red Army enters German territory near Goldap in East Prussia. The Soviets manage to break through the first defensive line but German units, including the tanks of Fallschirm-Panzer-Division Hermann Goring, defend their home soil fanatically and the Russian attack is brought up short east of Gumbinnen and around Ebenrode.

19 October 1944. Hitler orders the total destruction of Warsaw. In East Prussia, 4.Armee begins withdrawing from Tilsit, modern-day Sovetsk.

21 October 1944. Nemmersdorf in East Prussia falls to the Russians. When German units retake the town two days later they find that the civilian population, including some fifty French prisoners of war who were unfortunate enough to be billeted in local farms, have been murdered in the most barbaric fashion.

22 October 1944. Gumbinnen falls to the Russians but is retaken two days later by a Kampfgruppe made up of 5. Panzer-Division and the Tiger II tanks of schwere Panzer-Abteilung 505.

23 October 1944. The divisions of 3.Panzerkorps, including 1.Panzer-Division and 23.Panzer-Division, launch a counterattack around Debrecen in eastern Hungary. The fighting here lasts for almost a week.

25 October 1944. A strong German counterattack, involving elements of Panzer-Brigade 102 and the Führer-Grenadier-Brigade, is successful in retaking Goldap. The Russians would not attempt another serious assault in East Prussia until January 1945.

30 October 1944. The counterattacks at Debrecen come to a halt with the German units claiming the destruction of 600 Soviet tanks. But the Russians absorb these losses and begin a new offensive into Hungary and within two days units of the Red Army enter the south-eastern suburbs of Budapest.

1 November 1944. SS-Panzer-Regiment 5 reports that of its

authorised allocation of seventy-five Panther tanks just fifteen are operational.

5 November 1944. Bulgarian troops, now fighting with the Soviets, capture Podujevo in modern-day Kosovo.

13 November 1944. German forces withdraw from Skopje in northern Macedonia.

27 November 1944. Red Army units break through the German defensive lines and capture Mohacs in southern Hungary near the present-day Croatian border. On the same day, SS-Panzer-Regiment 3 reports that just nine Panthers are operational.

29 November 1944. Russian troops cross the Danube River into south-west Hungary.

5 December 1944. Soviet units launch a major offensive north-east of Budapest, pushing the Germans and their Hungarian allies 100 kilometres to the west during the next week.

8 December 1944. Red Army units begin the final phase of the encirclement of Budapest and by the following day reach the Danube River north of the city.

21 December 1944. The Soviets launch an assault on the Kurland defensive perimeter near Saldus. During this battle a Latvian unit of the Red Army faces elements of 19.Waffen-Grenadier-Division der SS made up of Latvian volunteers.

23 December 1944. The Russian breakthrough to the south-west of Budapest is now a 100-kilometre wide salient. Within three days the encirclement of the city is almost complete with the seizure of the Budapest to Vienna highway.

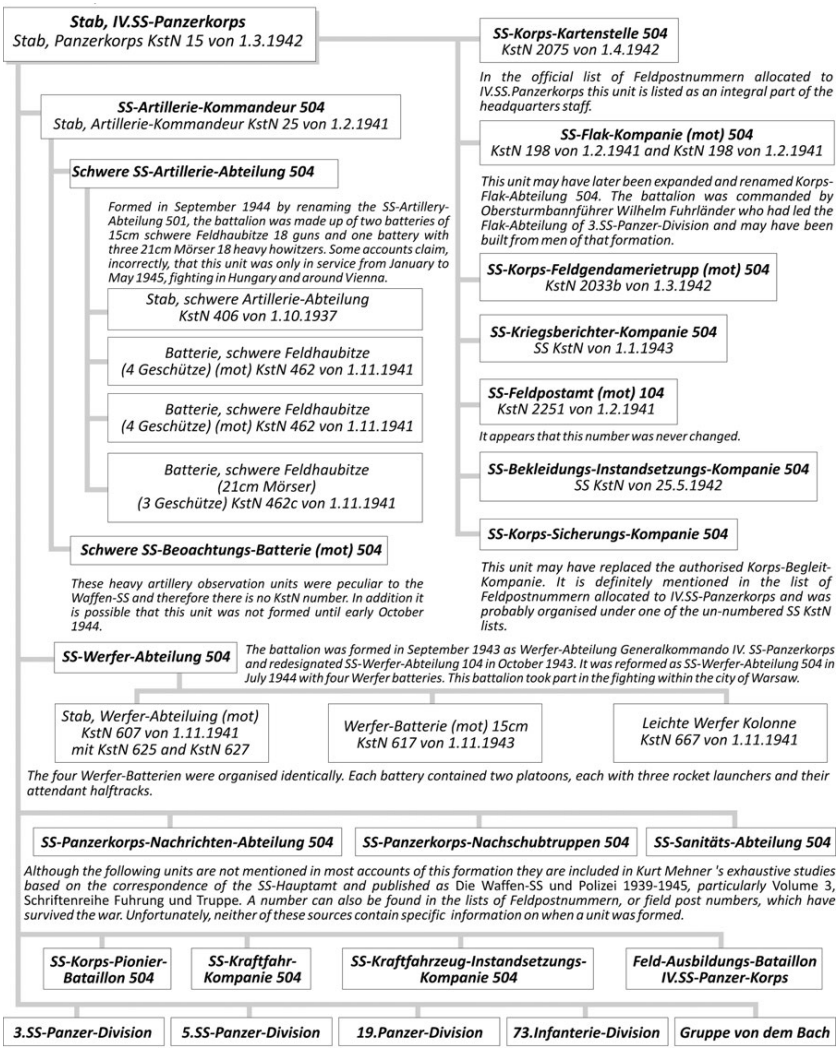
27 December 1944. The Russians capture Gran, this cutting all communications with Budapest and trapping five German and Hungarian divisions in the city.

A Pzkpfw V Panther ausf A tank of 4.Kompanie, SS-Panzer-Regiment 3. The official Soviet caption for this image states that it was taken at Pultusk, on the Narev River north of Warsaw, on 11 October 1944 and goes on to state that Panther tanks depicted here were disabled in the fighting of the previous month. At that time the regiment was fighting around Elsnerow, today a suburb of Warsaw, and Wola-Radyminska. Note the very obviously stencil-applied turret number and Totenkopf unit insignia on the hull glacis. This vehicle is also shown and discussed on page 19 of the Camouflage & Markings section. The tank in the background may be the regiment's from 2. Kompanie.

IV.SS-PANZERKORPS UNITS

IV.SS-PANZERKORPS, AUGUST-SEPTEMBER 1944

All formations of the German Army were organised according to detailed tables of establishment referred to as Kriegstärkenachweisung (KstN) which showed the official composition of a unit, listing the exact number of personnel and type of equipment from vehicles to small arms. Each KstN was identified by an individual number, which could identify the type of unit, and a date. The latter was all-important as many KstN were amended during the war and KstN issued by the SS-Hauptamt were rarely numbered, as can be seen here. Where I have been able to confirm the number and date I have included it here. Although Corps and Armies were essentially flexible organisations, at least at this stage of the war, the support elements of each were strictly prescribed while combat formations, such as the armoured and infantry divisions, could be attached as required. It should be noted that a number of the authorised corps-level units, for example the heavy tank battalion, were never formed for IV.SS-Panzerkorps.


Stab, IV.SS-Panzerkorps
Stab, Panzerkorps KstN 15 von 1.3.1942
SS-Korps-Kartenstelle 504
KstN 2075 von 1.4.1942
In the official list of Feldpostnummern allocated to IV.SS.Panzerkorps this unit is listed as an integral part of the headquarters staff.
SS-Artillerie-Kommandeur 504
Stab, Artillerie-Kommandeur KstN 25 von 1.2.1941
SS-Flak-Kompanie (mot) 504
KstN 198 von 1.2.1941 and KstN 198 von 1.2.1941
This unit may have later been expanded and renamed Korps-Flak-Abteilung 504. The battalion was commanded by Obersturmbannführer Wilhelm Fuhrländer who had led the Flak-Abteilung of 3.SS-Panzer-Division and may have been built from men of that formation.
Schwere SS-Artillerie-Abteilung 504
Formed in September 1944 by renaming the SS-Artillery-Abteilung 501, the battalion was made up of two batteries of 15cm schwere Feldhaubitze 18 guns and one battery with three 21cm Mörser 18 heavy howitzers. Some accounts claim, incorrectly, that this unit was only in service from January to May 1945, fighting in Hungary and around Vienna.
SS-Korps-Feldgendamerietrupp (mot) 504
KstN 2033b von 1.3.1942
Stab, schwere Artillerie-Abteilung
KstN 406 von 1.10.1937
SS-Kriegsberichter-Kompanie 504
SS KstN von 1.1.1943
Batterie, schwere Feldhaubitze
(4 Geschütze) (mot) KstN 462 von 1.11.1941
SS-Feldpostamt (mot) 104
KstN 2251 von 1.2.1941
Batterie, schwere Feldhaubitze
(4 Geschütze) (mot) KstN 462 von 1.11.1941
It appears that this number was never changed.
Batterie, schwere Feldhaubitze
(21cm Mörser)
(3 Geschütze) KstN 462c von 1.11.1941
SS-Bekleidungs-Instandsetzungs-Kompanie 504
SS KstN von 25.5.1942
SS-Korps-Sicherungs-Kompanie 504
Schwere SS-Beoachtungs-Batterie (mot) 504
These heavy artillery observation units were peculiar to the Waffen-SS and therefore there is no KstN number. In addition it is possible that this unit was not formed until early October 1944.
This unit may have replaced the authorised Korps-Begleit-Kompanie. It is definitely mentioned in the list of Feldpostnummern allocated to IV.SS-Panzerkorps and was probably organised under one of the un-numbered SS KstN lists.
SS-Werfer-Abteilung 504
The battalion was formed in September 1943 as Werfer-Abteilung Generalkommando IV. SS-Panzerkorps and redesignated SS-Werfer-Abteilung 104 in October 1943. It was reformed as SS-Werfer-Abteilung 504 in July 1944 with four Werfer batteries. This battalion took part in the fighting within the city of Warsaw.
Stab, Werfer-Abteiluing (mot)
KstN 607 von 1.11.1941
mit KstN 625 and KstN 627
Werfer-Batterie (mot) 15cm
KstN 617 von 1.11.1943
Leichte Werfer Kolonne
KstN 667 von 1.11.1941
The four Werfer-Batterien were organised identically. Each battery contained two platoons, each with three rocket launchers and their attendant halftracks.
SS-Panzerkorps-Nachrichten-Abteilung 504
SS-Panzerkorps-Nachschubtruppen 504
SS-Sanitäts-Abteilung 504
Although the following units are not mentioned in most accounts of this formation they are included in Kurt Mehner 's exhaustive studies based on the correspondence of the SS-Hauptamt and published as Die Waffen-SS und Polizei 1939-1945, particularly Volume 3, Schriftenreihe Fuhrung und Truppe. A number can also be found in the lists of Feldpostnummern, or field post numbers, which have survived the war. Unfortunately, neither of these sources contain specific information on when a unit was formed.
SS-Korps-Pionier-Bataillon 504
SS-Kraftfahr-Kompanie 504
SS-Kraftfahrzeug-Instandsetzungs-Kompanie 504
Feld-Ausbildungs-Bataillon IV.SS-Panzer-Korps
3.SS-Panzer-Division
5.SS-Panzer-Division
19.Panzer-Division
73.Infanterie-Division
Gruppe von dem Bach

The number of combat units could vary but those shown above, together with the Hungarian 1st Cavalry Division, were attached in mid-September 1944. Gruppe von dem Bach was made up of various Wehrmacht and Police personnel stationed in and around Warsaw and supplemented by Cossack cavalry and infantry units and elements of Azerbaijani regiments. Thisformation only fought in the battles in the Polish capital.

From 1940, in anticipation of the coming invasion of the Soviet Union, the number of Waffen-SS field divisions was increased and consequently SS corps headquarters, with their authorised corps troops, were formed to provide tactical control for those divisions in the field. Initially, only formations of the Waffen-SS were allocated to the new corps and the official organisation called for two divisions per corps headquarters. But as the war progressed the number of divisions could vary depending on the mission and SS corps were often made up of a mix of army and Waffen-SS units.

As with their army counterparts, each SS corps was identified by a Roman numeral and contained a number of support and security units which were, for the most part, permanently attached. Generally speaking those corps formed in the early part of the war received their full allocation of these ancillary units while those created in the latter stages were less well endowed. A detailed table of organisation for IV. SS- Panzerkorps is shown on page 8. The unit title of corps troops originally contained the suffix identifying the corps, for example, Sicherungs-Kompanie der IV.SS-Panzerkorps, but this was later replaced by a number arrived at by adding 100 to the corps number, such as SS- Korps-Kartenstelle 104.

In late 1944, with the formation of SS armies, these units were again renumbered to fall in line with the 500 series although some are referred to by their old number in official correspondence well into 1945 (1).

While the organisation of the SS corps paralleled that of the army formations, and Waffen-SS units in the field were subordinated to army command, it should be remembered that they were officially controlled by the SS-Führungshauptamt, or main operational office, which they relied on for training and replacements.

Formed in August 1943, IV.SS- Panzerkorps was originally intended to contain the newly-raised divisions of the Waffen-SS that were at that time training in France (2). But units were continually siphoned off to other formations and it was not until June 1944 that a serious attempt was made to complete the build-up of IV.SS-Panzerkorps when it was reformed as the headquarters of 3.SS-Panzer- Division Totenkopf and 5.SS-Panzer- Division Wiking.

Although the support elements of VII.SS-Panzerkorps were absorbed into the new formation the full authorisation of these corps units was never reached, particularly the heavy tank battalion, schwere SS-Panzer-Abteilung 104, the formation of which was abandoned as early as May 1944.

Commanded by Obergruppenführer Herbert Otto Gille, who had led the Wiking Division, elements of IV.SS-Panzerkorps took part in the suppression of the Warsaw Uprising in August 1944 while the mobile units held back the Soviet advance to the east of the city. Eventually falling back to Modlin, north-west of Warsaw on the Vistula, the corps spent the rest of 1944 here engaged in almost continuous heavy fighting.

Units of the corps were involved in the attempts to relieve Budapest and the subsequent fighting around Lake Balaton as part of Operation Frühlingserwachen, the last major German offensive of the war. When the Russians counterattacked, the corps narrowly escaped encirclement, thanks largely to the efforts of 9.SS- Panzer-Division, and withdrew towards Vienna. The last remnants of IV.SS-Panzerkorps surrendered to units of the US Army on 9 May 1945 but many were handed back to the Soviets.

At different times during 1944 the corps headquarters controlled, in addition to the Waffen-SS units mentioned above, 73.Infanterie-

Division, 96.Infanterie- Division, Grenadier-Brigade 1131, 4. Panzer-Division, 19. Panzer-Division, Bewährung-Bataillon 500, 1st Hungarian Cavalry Division and, briefly, 25.Panzer- Division (3).

In the battles of 1945, including the operations in northern Hungary, parts of 1.Panzer-Division and 3.Panzer-Division, 4. Kavallerie-Brigade, 2nd Hungarian Armoured Division and 9.SS-Panzer- Division were attached to the corps. But of all the formations subordinated to IV.SS- Panzerkorps the best-known are the Totenkopf and Wiking Divisions and brief histories of their Panzer regiments, with particular regard to the Panther battalions, are given here. Although outside the period covered by this book, I have included the events of 1945 for the sake of completeness.

SS-Panzer-Regiment 3. Formed with two battalions on 14 October 1942 and attached to 3.SS-Panzer-Division Totenkopf. On 21 September 1943, I.Abteilung was withdrawn to Germany to begin retraining on the Panther but the first of the new tanks were not issued until 13 January 1944 when just four new vehicles were despatched by the Heereszeugamt (4).

Subsequent deliveries were limited to small numbers and in early March, five of the ten tanks that had been issued by that time were diverted to SS-Panzer-Regiment 1 which was at that time fighting to retake Kharkov. The summer battles in Normandy and the defensive fighting on the Eastern Front meant that any new tanks were sent to the formations engaged in combat and the battalion was forced to wait until the end of July before its full complement of Panthers had been delivered with a total of seventy-six vehicles being allocated in that month alone (1).

Notes

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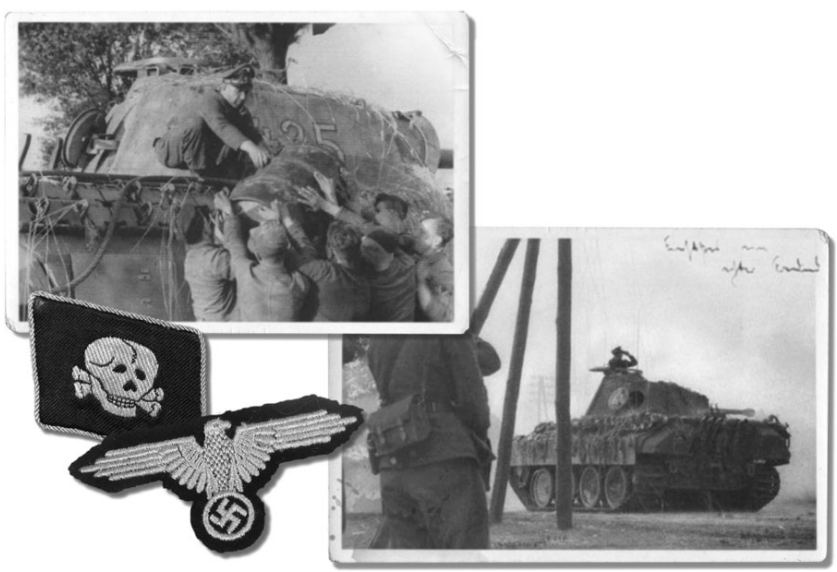
1. Numbered SS corps should not be confused with formations such as SS- Korps West, SS-Korps Gille and SS-Korps Oder which were formed late in the war and were essentially large Kampfgruppen.

2. 9.SS-Panzer-Division Hohenstaufen and 16.SS-Panzergrenadier-Division Reichsführer SS.

3. A Bewährung-Bataillon was a probation unit for men who had committed serious offences but were deemed capable of rehabilitation.

4. The Heereszeugamt was the army's supply directorate. Waffen-SS combat units were reliant on the army for the supply of most equipment with some exceptions such as uniforms.



Panther ausf A tanks of SS-Panzer-Regiment 3 photographed in the summer of 1944 during the battles east of Warsaw. The style of turret number, executed in white with a black outline, was typical of 4.Kompanie tanks and most Panthers carried the division's Totenkopf unit insignia on the right side rear stowage bin and some on the hull glacis near the machine-gun mount. Just visible in the photograph below

is a white triangle on the turret's rear access hatch. These markings are discussed further in the Camouflage & Markings section.

Notes

1. Elements of I.Abteilung began returning to the front as early as Saturday, 22 July 1944 although the last allocation was not made until the following Tuesday. Additionally, five tanks which had been on loan were returned to SS-Panzer- Regiment 1.

By the time the Panther battalion returned to the East, 3.SS-Panzer-Division had lost more than half its tanks and assault guns in the heavy fighting along the line of the Niemen River and around Siedlce, approximately 60 kilometres east of Warsaw on the main road to Brest in modern-day Belarus. On 26 July 1944, the last units of I.Abteilung were unloaded near Warsaw and during the next 48 hours the tanks of 1. Kompanie were briefly subordinated to General Gustav Höhne's VIII.Armeekorps, illustrating just how flexible the corps system was. In mid- August the division took part in the battles in front of Warsaw, particularly in the defence of Radzymin and Rembertow, today outer suburbs of the Polish capital, supporting units of the Wiking Division and Fallschirm-Panzer-Division Hermann Göring.

While fighting raged inside the city, the division helped to blunt at least three major Soviet offensives, losing over 5,000 men killed and wounded, before being withdrawn from the front in late September and moved to Plonsk, north of Warsaw. At that time SS-Panzer-Regiment 3 reported that twenty-two serviceable Panthers were on hand.

During October 1944, the Panzer regiment was involved in the defensive actions between Lodz and Poznan, well to the west of Warsaw, but during the following month the division was withdrawn from the front and held as an operational reserve for 9.Armee. Although no new equipment was received at this time, many wounded men, who had been convalescing, returned to the regiment. The crews of SS-Panzer- Regiment 3 spent Christmas travelling between Nasielske in Poland and Gyor in northern Hungary and on 26 December 1944, the regiment's remaining twenty- one Panthers were given a comprehensive coat of whitewash camouflage in anticipation of the coming offensive to relieve the garrison of Budapest.

In January 1945 the division, as part of IV.SS-Panzerkorps, took part in Operation Konrad I, the first in a series of assaults, and despite a promising start, the attack was stalled after six days near Biscke, some 25 kilometres outside the Hungarian capital. One of the first casualties of this operation was Sturmbannführer Hubert-Erwin Meierdress, the commander of I.Abteilung, who was killed as his Panther entered the streets of Dunaalmas, a small village on the River Danube between Komamo and Esztergom. On Sunday, 7 January 1945 Operation Konrad II commenced and although the division was allocated a purely defensive role, the frontline positions were actually pushed a further 3 kilometres closer to the city. By the following Saturday the division was relieved by elements of 3.Kavallerie- Brigade and, together with the Wiking division, moved to the area south-west of Stuhlweissenburg, totally undetected by Soviet intelligence.

In the early hours of 18 January 1945 the division's tanks moved forward as part of Operation Konrad III, crossing the Budapest road and heading for Dunaujvaros and the Danube. By the end of the first day the tanks of the Totenkopf and Wiking divisions had created a salient some 60 kilometres deep and 30 kilometres wide. On the following day the Germans reached the Danube, overrunning the Soviet 4th Guards Army and encircling two enemy corps. A Russian mechanised corps, attempting to mount a

counterattack, was almost totally wiped out. The enemy troops that had been crossing the river were caught completely unawares by the German tanks and assault guns and after having been pounded by the Luftwaffe for much of the day were thrown into panic.

On the afternoon of 20 January 1945 German reconnaissance units reported that there were no Red Army troops between the lead elements of IV.SS- Panzerkorps and Budapest. Despite these setbacks the Russians were able to rush large numbers of reinforcements to the front and by 26 January 1945, with the tanks of the Totenkopf division just 25 kilometres from the Budapest defensive perimeter, the headquarters of 6.Armee called a halt to the offensive. The commander of IV.SS-Panzerkorps, Obergruppenführer Gille, was furious and maintained at the time and in a number of post-war articles that his tanks could have reached the beleaguered city.

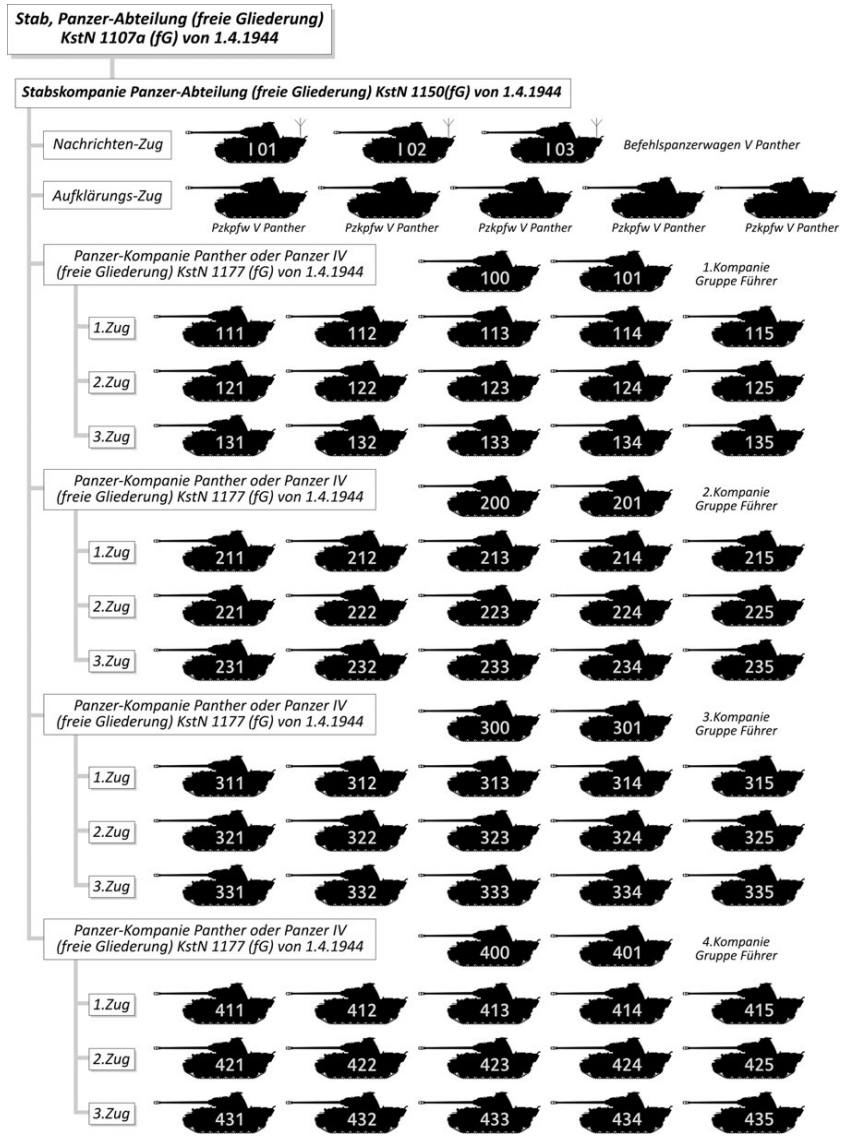
On 2 February 1945 the division was withdrawn to Stuhlweissenburg, the starting point for the Konrad III assault, and spent most of the month resting and refitting. Although a large draft of replacements was received by early March, bringing the division's manpower tally to over 19,000, the total armoured strength stood at just thirty-one tanks of all types and seventeen assault guns. A number of accounts suggest that SS- Panzer-Regiment 3 was at full strength at the start of the Konrad offensives but I. Abteilung had not received any replacement tanks since July 1944 when the battalion left Germany and the battles around Warsaw had certainly taken their toll. While no precise figures for losses are available for this period it is known that thirty-nine tanks and self-propelled guns were lost by IV.SS-Panzerkorps in the initial attack alone and at the conclusion of Konrad III the staff of 6.Armee reported that 3.SS-Panzer-Division had nine operational tanks on hand (1).

Notes

1. An earlier report issued by Heeresgruppe Süd, dated 23 January 1945, gives the division's total armour strength as five Panthers, three Pzkpfw IV tanks and four Jagdpanzers. It is almost certain that some of these vehicles were in need of repair.

I. ABTEI LUNG, SS-PANZER-REGIMENT 3 TOTENKOPF, JULY-AUGUST 1944

As the greater part of the battalion's formation and training took placed in early summer 1944 I have assumed the organisation shown here and the KstN which where issued in April 1944, although they were not formalised until the following August. I can offer no information on the numbering of the tanks of the battalion's Aufklärungs-Zug although they were certainly on hand when l.Abteilung was transported to the Eastern Front.



This establishment replaced Stab und Stabskompanie (frei Gliederung), Panzer-Abteilung KstN 1107 (fG) von 1.4.1944 (vorausgabe). Both were considered as interim organisations and replaced on 1 November 1944.

Vehicles of SS-Panzer-Regiment 3 photographed in Poland during the summer of 1944. The tank closest to the camera is a Panther ausf G model assembled at some time after June 1944 when the sheet metal covers were added to the exhaust mufflers. The significance of the triangle marking on the turret rear access hatch is not fully understood and it is seen on both l.Kompanie and 3.Kompanie tanks. Note the division's unit insignia on the rear stowage bin.

Obersturmbannführer Otto Paetsch, the commander of ll.Abteilung, SS-Panzer-Regiment 5, photographed in front of his Befehlspanzerwagen V ausf D holding Bil the bouquet of flowers with his company officers. Note the early-style cupola, an identifying feature of this model, and the apertures for the binocular sight on the main gun mantlet. The Sternantenne D for the FuG 8 command radio is just visible. This vehicle is almost certainly the tank shown at the top of page 56, numbered 1101. This may have been the occasion of Paetsch's farewell to the regiment which would date this photograph to late June 1944.

On 6 March 1945 the Germans launched Operation Frühlingserwachen, an assault to secure the Nagykanizsa oil fields in southern Hungary. Initially, the attack made good progress but a combination of the weather, mud-soaked terrain and stiff Soviet resistance eventually prevented 2.Panzerarmee from linking up with the Waffen-SS divisions attacking from the western edge of Lake Balaton. On Friday, 16 March 1945 the Soviets launched a major offensive aimed at Vienna which threatened to cut off the German units fighting in Hungary and by the following Wednesday 3.SS-Panzer-Division had been pushed back to Csatka, about 40 kilometres north of Stuhlweissenburg, losing most of its vehicles and heavy weapons along the way.

On 25 March the survivors reached the Raba bridgehead near the Austrian border and from there made their way through Ödenburg to Schwechat, today an outer suburb of Vienna. On 31 March 1945, with just two Panthers remaining, the battalion was absorbed by the regiment's II.Abteilung which by that time was made up of four Pzkpfw IV tanks, three Tigers and a single tank destroyer taken over from SS-Panzeijäger-Abteilung 3. Within two weeks the few remaining armoured vehicles were formed into a Kampfgruppe under the command of Obersturmführer Helmut Neff (1).

In early April the remnants of the division, by now containing little more than a battalion of infantry supported by the six serviceable tanks of Kampfgruppe Neff, were tasked with securing the crossings of the Danube Canal between Stockerau and Krems, 20 kilometres north of Vienna. But on 15 April 1945 the city fell to the Soviets and those German units that managed to escape headed towards the west with the hope of surrendering to the Americans. On 7 May 1945 the division's last commander, Brigadeführer Helmuth Becker, ordered his men to make their way towards the Allied lines as best they could and almost 1,100 men gave themselves up to US Army units near Linz (2).

SS-Panzer-Regiment 5. Formed on 28 February 1943, the regiment was attached to 5.SS-Panzer-Division Wiking. The regimental staff and II.Abteilung were raised, in part, from a cadre of experienced officers and NCOs from SS-Panzer-Abteilung 5, which had been serving with the division since April 1942 and was now renamed I.Abteilung, SS-Panzer-Regiment 5. The battalion's II.Abteilung began its conversion to the Panther in December 1943 receiving two Panther ausf D models which had been handed over from SS-Panzer-Regiment 1 (3).

At the end of March 1944 the Panther battalion returned to the Eastern Front and famously took part in the relief of Kovel, on the main highway between Lublin and Kiev, with the tanks of 8.Kompanie breaking through the Soviet ring around the town. The Panther of Obersturmführer Karl Nicolussi-Leck, the company commander, had been the first tank of the relief force to enter the town, crashing through a Russian barricade to do so and for his actions Nicolussi-Leck was awarded the Ritterkreuz (4).

Notes

1. Obersturmführer Neff had previously led the regiment's Tiger company. At least one source states that a Panther was taken over from the Vienna arsenal at this time.

2. Despite initial assurances that they would be accepted as prisoners of war all were eventually handed over to the Soviets.

3. These tanks had In fact been shipped in the previous month but exactly when they were delivered Is uncertain.

4. This tank. Panther 800, albeit in a later incarnation, is shown in the Camouflage & Markings section on page 23.

The 8.Kompanie tanks remained in Kovel to aid in the town's defence and by early April the Soviet encirclement of the town had been broken. The division, including the Panthers of II.Abteilung, was then withdrawn to SS-Truppenübungsplatz Heidelager, the huge Waffen-SS training facility near Pustkow in southern Poland. On 17 April 1944 a total of eight tanks were allocated to the battalion from Nachschub Ost and, contrary to what is stated in some accounts, these would be the last new Panthers issued before the war's end (1).

In late April the division returned to the front and in July 1944 the tanks of SS- Panzer-Regiment 5 were thrown into the fighting for the Lesna bridgehead near Kamyanyets, 40 kilometres north-east of Brest in modern-day Belarus. Although the Wiking and Totenkopf divisions were two of the strongest armoured formations available to the Germans at that time, they could do little to halt the massive Soviet offensives which had been underway since late June and, with the survivors of Heeresgruppe Mitte, both divisions were swept back to the west of the River Bug.

On 3 August the division took part in an attack from Stanislawow in southern Poland, now Ivano-Frankivsk in Ukraine, in an attempt to close a large gap which the Russians had created in the sector of XXXIX.Panzerkorps. Although the operation was ultimately successful, the German units in this sector were pushed back a further 10 kilometres.

As part of IV.SS-Panzerkorps the division took part in the battles to the east of Warsaw and in the first week of September was transferred to the area around Serock, a town at the confluence of the Bug and Narew Rivers north of the Polish capital. Near the town, three Panthers of 7.Kompanie, led by Obersturmführer Ulf-Ola Olin, managed to destroy eleven Russian anti-tank gun positions and two T-34 tanks that came to their aid. In the following month, Obersturmführer Olin knocked out five Russian tanks in a single action and was later awarded the German Cross in Gold, the only Finnish volunteer to receive the medal (2).

By early October the division was again in combat, fighting in a series of confused actions in the area north of Warsaw, reinforced by an infantry battalion from SS-Panzergrenadier-Regiment 10 of 14.Waffen-Grenadier-Division der SS made up of Ukrainians from the former Austrian province of Galicia. In a single action outside Nieport on the Narew River, 2.Kompanie lost the equivalent of a platoon of tanks and by November the shortage of armoured

vehicles was so acute that SS-Panzer-Regiment 5 was reformed as two Kampfgruppen, the first made up from the remnants of 2, 4, 5 and 6.Kompanien while the second contained 1, 3, 7 and 8.Kompanien. The latter was commanded by Obersturmführer Nicolussi-Leck and acted as a training and replacement unit and was mostly stationed in Lodz, about 130 kilometres west of Warsaw and the frontline.

Notes

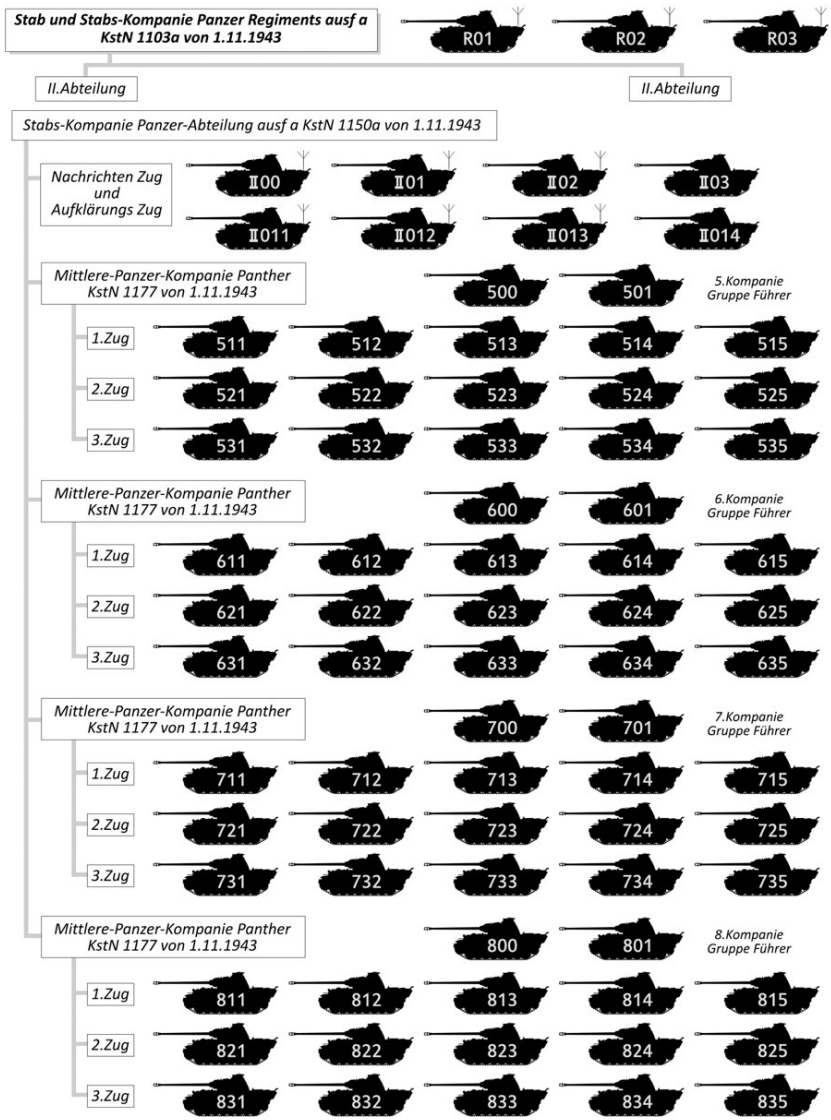
1. Nachschub Ost directed the allocation of equipment for units serving on the Eastern Front.

2. As most readers will be aware, the Wiking Division contained a number of foreign volunteers from western Europe and the Scandinavian countries although their numbers and contribution have been greatly exaggerated in many post-war accounts.

II.ABTEILUNG, SS-PANZER-REGIMENT 5 WIKING, JULY-AUGUST 1944

As the Panther battalion was in action by the end of March 1944, I have assumed the KstN which came into effect on 1 November 1943 before the Frei Gliederung orders were disseminated. I have included the regimental headquarters here and photographic evidence confirms that Panther R01 did exist, although the regiment's commander is most often pictured in the turret of tank R02. All three Panzerbefehlswagen command tanks were based on the Pzkpfw V ausf D model and were handed over from SS-Panzer-Regiment 1. Again, photographs of tank R03 exist but the headquarters and II. Abteilung left Germany with seventy-eight Panthers on hand, one short of the number shown here, and that tank may have been one of the vehicles received from Nachschub Ost on 17 April 1944. The regimental headquarters may in

fact have been organised using KstN 1103 von 1.11.1943, Stab und Stabs-Kompanie eines Panzer-Regiments, which allowed for a Nachrichten and AufklarungsZug with five Pzkpfw IV tanks in addition to the three Panthers.



A Pzkpfw V Panther ausf A of 5.Kompanie, SS-Panzer-Regiment 5 photographed during the fighting east of Warsaw in July and August 1944. The intricate pattern of camouflage is examined on page 25 of the Camouflage & Markings section of this book.

Photographed during Operation Use, a limited offensive to finally break the Soviet ring around Kovel in late April 1944, this Panther ausf A may

be from 6. Kompanie of SS-Panzer-Regiment 5 although the turret number has been comprehensively obscured. The vehicle in the foreground is an Sdkfz 251/7 Pionierpanzerwagen, a purpose-built assault engineer vehicle fitted with light bridging ramps.

In December 1944 the Wiking division, with 3.SS-Panzer-Division, was gradually withdrawn from the front in Poland and moved to Hungary. On the first day of the new year the regiment reported that just twenty-two serviceable Panthers were available for deployment.

The regiment took part in the Konrad series of offensives, as mentioned above, and when the attempts to relieve Budapest were finally called off on 26 January 1945, the division could only muster a small Kampfgruppe, reporting shortfalls in equipment of fifty-one Panthers, seventy- one Pzkpfw IV tanks and the staggering loss of 106 armoured halftracks. Efforts were made to replace the losses suffered by the division's Panzergrenadier regiments but most of the reinforcements were surplus Kriegsmarine and Luftwaffe personnel who had been hastily retrained as infantrymen (1).

But the constant pressure of the continued Soviet assaults meant that by the first week of March 1945, when Operation Frühlingserwachen began, most of the Panzer regiment's remaining heavy equipment had been lost. When the division's commander, Oberführer Karl Ullrich, was directed to attack the Russian positions around Budapest on 21 March 1945 he refused and ordered his men to withdraw towards the north-west, past Lake Balaton (2).

After three days the survivors of the Budapest fighting reached Veszprem on the northern shore of the lake where Ullrich was ordered to move his division almost 100 kilometres to the west and take up a position in the defences south-east of Fürstenfeld, near

Graz in Austria. But not a single tank and very little ammunition was allocated to the division and the reinforcements that did arrive were drawn from Luftwaffenhelferen (3), men from the security and emergency services and recent draftees, most of the latter over 50 years of age.

Rather than needlessly sacrifice what remained of his division, Ullrich again ordered the survivors to break out towards the west and most were able to surrender to American units near the town of Radstadt, south of Salzburg and unlike their comrades from the Totenkopf division they were not handed back to the Russians.

In early April, as the survivors of 5.SS- Panzer-Division were fighting their way towards the relative safety of the American lines, a number of tank crews of 8.Kompanie under Hauptsturmführer Nicolussi-Leck were sent to Germany in the hopes of picking up a number of replacement Panthers. Caught up in the American and British advance they found themselves in Hannover where Nicolussi- Leck discovered seven serviceable Jagdpanther tank destroyers at the nearby MNH assembly plant at Hannover- Laatzen. These fought on until 16 April 1945 when the last of their fuel and most of their ammunition was expended, the only unit of the Wiking division to serve in the West (4).

Notes

1. The commander of 6.Panzerarmee, Oberstgruppenführer Dietrich claimed, perhaps unfairly, that these men had no concept of war in the East and were in fact a burden.

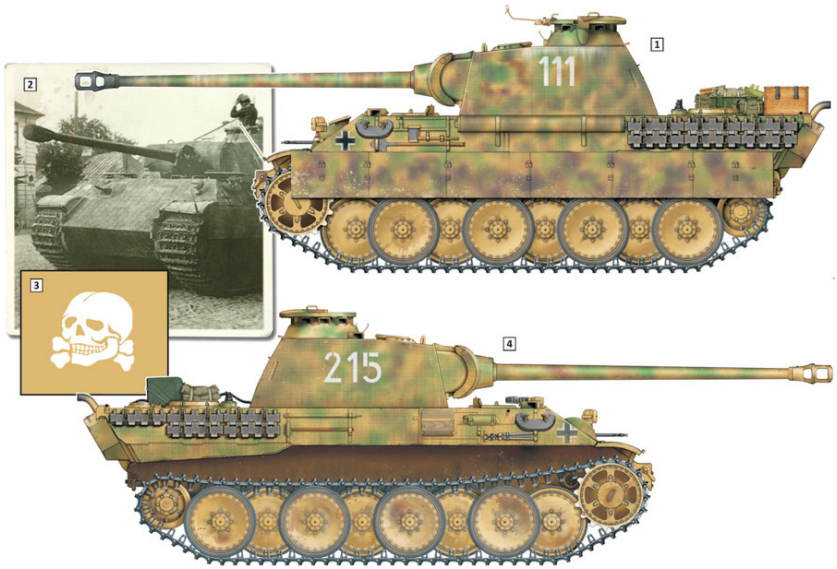
2. Ullrich had been a member of the SS- Verfügungstruppe, the prewar force that had evolved into the Waffen-SS, and had served with combat units from 1940. That such a highly decorated and

committed soldier would risk a death sentence by defying Hitler's personal order only confirms the hopelessness of the situation.

3. More commonly known as Flakhelfer, many of these were little more than children.

4. This episode is examined in some detail in TankCraft 8, Jagdpanther Tank Destroyer German Army and Waffen-SS, Western Europe 1944-1945.

CAMOUFLAGE & MARKINGS

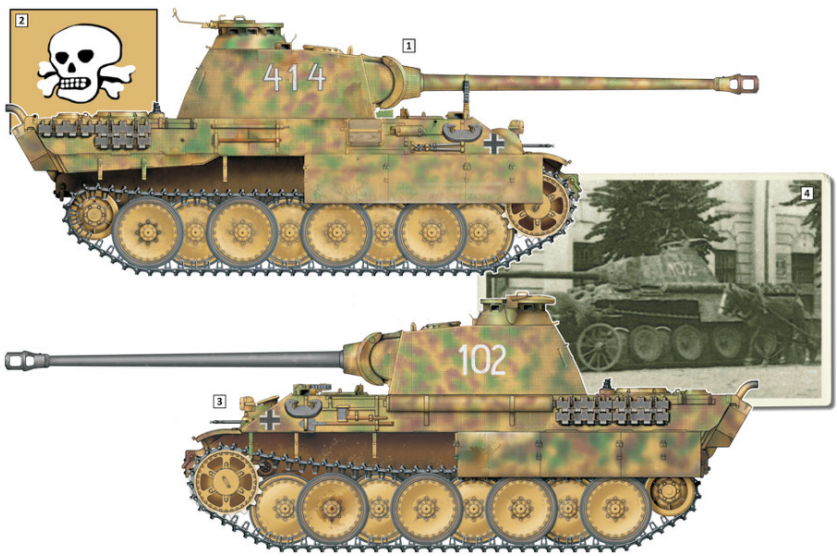


1. Pzkpfw V Panther ausf A. 1.Kompanie, SS-Panzer-Regiment 3. Poland, summer 1944. The appearance of thistank istypical of the Panthers of I.Abteilung during the summer battles of 1944 which took place north and east of Warsaw. All were neatly painted in a light mottling of Olivgrün and Rotbraun on the Dunkelgelb base coatascan beseenfrom ourphotograph (2).

Several variations of the well known unit insignia of 3.SS-Panzer-Division were used and the more detailed version shown here (3) seems to have been common within the regiment's first and secondcompanies.

4. Pzkpfw V Panther ausf A. 2.Kompanie, SS-Panzer-Regiment 3. Poland, autumn 1944. Photographed near Pultusk on the Narew River north of Warsaw, this tank was one of several that the regiment lost in the battles of September. Note that the

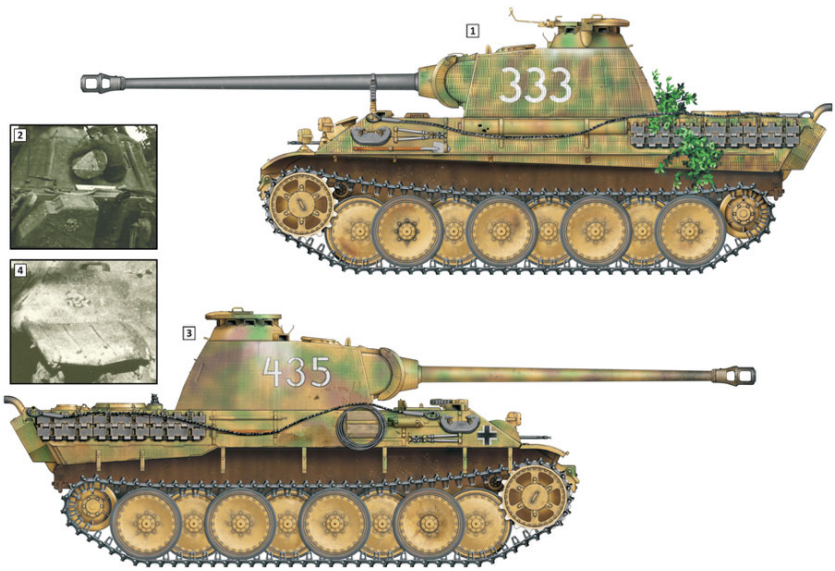
company number seems to lack the black outline which was commonly seen on the Panthers of I.Abteilung during the summer of 1944. Although difficult to discern in the photograph on which this illustration is based, the Totenkopf unit insignia is just visible on the hull front to the left of the Kugelblende. This vehicle was fitted with the exhaust mainfold cooling pipes introduced into production in January l944.



1. Pzkpfw V Panther ausf A. 4.Kompanie, SS-Panzer-Regiment 3. Poland, autumn 1944. Most Panthers carried the division's famous Totenkopf division insignia on the hull front and also on the left-hand side stowage bin on at the rear (2). Compare this marking with that shown on the previous page. Although we cannot be sure, the black outline may be a later affectation or it may not have been adopted by all the battalion's companies.

3. Pzkpfw V Pantherausf A. l.Kompanie, SS-Panzer-Regiment 3. Poland, summer 1944. Photographed in Seidlce, east of Warsaw, shortly after the regiment's Panther battalion arrived on the Eastern Front, this later model Panther ausf A is

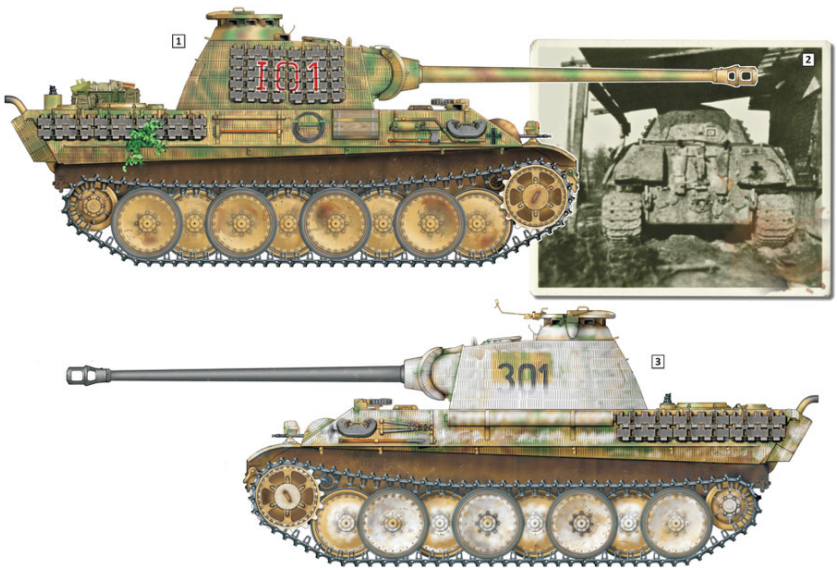
finished in a mottled camouflage scheme that can also be discerned from our photograph (4). Gun barrels were coated in a heat-reistant lacquer which was very dark, almost black, in colour and many were left un painted as shown here. Note that the company number does not seem to have an outline and that the numbers are not the same size.



1. Pzkpfw V Panther ausf G. 3.Kompanie, SS-Panzer-Regiment 3. Poland, autumn 1944. The turret numbers applied to tanks of this company were similar in size and style to that shown here until 1944 when numbers with a dark centre and white outline, or solid black, were adopted. Clearly visible in the series of photographs which depict this tank is the white triangular marking on the turret rear access hatch (2). The exact significance of this marking is not known but it is seen on both 3.Kompanie and l.Kompanie Panthers and may indicate a company or platoon commander.

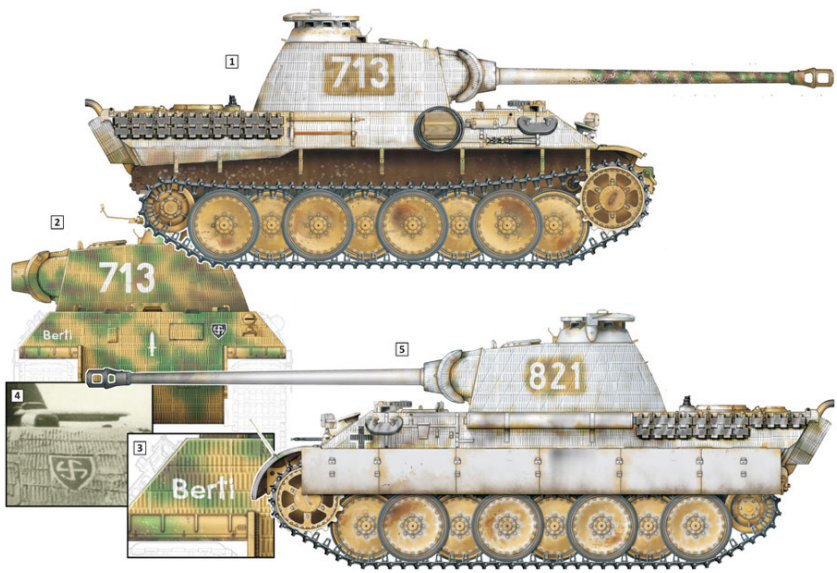
3. Pzkpfw V Panther ausf A. 4.Kompanie, SS-Panzer- Regiment 3. Poland, autumn 1944. Photographed at Pulutsk, a Russian scrapyard north of Warsaw, in October 1944 this tank is also

depicted in the photograph reproduced on page 7. At first glance the turret numbers of the 4.Kompanie Panthers appear to be hand painted but close examination of the available images shows that they were applied using a stencil. This tank also has the unit insignia rendered in exactly the same style as the 4. Kompanie Panthershown on page 18.



1. Befehlspanzerwagen V Panther ausf G. Stab, I.Abteilung, SS-Panzer-Regiment 5. Poland, autumn 1944. Photographed in October, this tank was the command vehicle of Sturmbannführer Erwin Meierdress, the Abteilungsführer of the regiment's first battalion. Late in 1944 most Panthers of this regiment seem to have been fitted with the spare track links on the turret side seen here. The company number, here identifying the battalion commander, is rendered here with a red centre but this could be another dark colour. Note the rectangular marking on the turret access hatch, probably in the same colours, which identifies a battalion headquarters tank. Note also the dark outline of the Balkenkreuz which is evident in our photograph (2). Sturmbannführer Meierdress was killed in this vehicle on 2 January 1945 although the tank was later recovered.

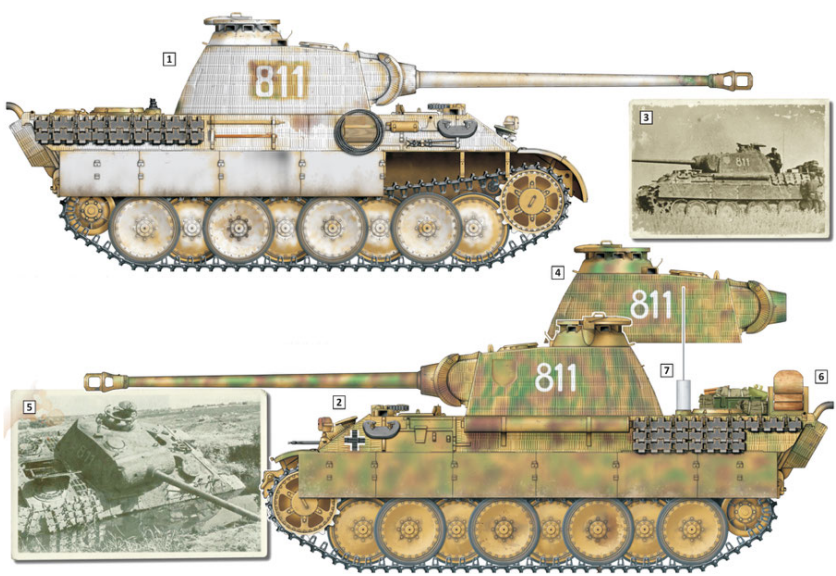
3. PzkpfwV Panther ausf G. 3.Kompanie, SS-Panzer- Regiment 3. Hungary, winter 1945. Although the photograph on which this illustration is based can definitely be dated to early 1945, and therefore outside the time frame of our study, it is known that the Panthers of I.Abteilung, SS-Panzer-Regiment 3 were all painted with whitewash in the last days of 1944 in anticipation of the coming offensive in northern Hungary. For some reason the company number is partially covered.



1. Pzkpfw V Panther ausf A. 7.Kompanie, SS-Panzer- Regiment 5. Poland, April 1944. Probably photographed sometime in April 1944, this tank is still coated in white wash camouflage. At least one account attests to the comprehensive application of white paint that is apparent here. Another image of Panther 713, unfortunately undated, shows a mottled camouflage of Olivgrün and Rotbraun on the Dunkelgelb base (2). Note the name, Berti (3) and the sword insignia, the latter of which is also seen in other photographs of 7.Kompanie tanks. Note also the very dark, probably black, background of the divisional unit insignia (4). Full sets offenders, as shown below, were a

feature of the battalion's Panthers when they first arrived in the East but those of 713 were removed when the tracks were damaged by mines.

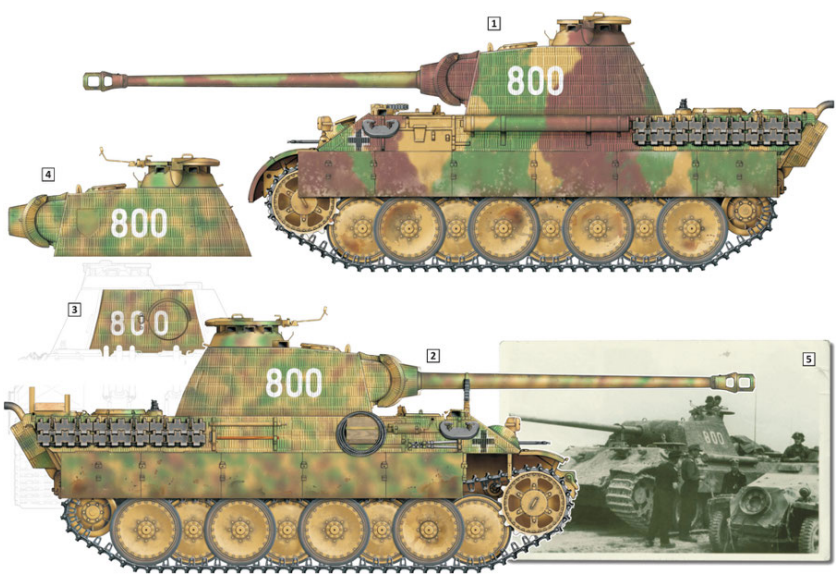
5. Pzkpfw V Panther ausf A. 8.Kompanie, SS-Panzer-Regiment 5. Poland, April 1944. This tank was commanded by Scharführer Herberts and was the second vehicle to be disabled by a mine on the railway line outside Kovel on 29 March 1944. Note the unusual pattern created by the application of Zimmeritanti-magnetic mine paste. There is some debate as to the colour of the numbers used by the company and indeed photographs taken only a few days after the fighting show that other Panthers used a very dark shade, probably black, in some cases very crudely rendered.



1. Pzkpfw V Panther ausf A. 8.Kompanie, SS-Panzer-Regiment 5. Poland, March 1944. This vehicle, commanded by Hauptscharführer Eugen Faas, is one of the tanks which took part in the attempt to relieve the garrison of Kovel on 29 March 1944. Although disabled, it was later recovered. Untersturmführer Manfred Renz, whoserved with the battalion

headquarters, specifically mentionsthat these tanks received a new coat of whitewash camouflage just before the battle.

2. Pzkpfw V Panther ausf A. 8.Kompanie, SS-Panzer-Regiment 5. Poland, summer 1944. The tank shown above was either lost or renumbered at some time after April 1944 as Panther 811 is now a later production model fitted with the Kugelblende machinegun mount. A large shield-shaped patch of Zimmerit has been removed from the left side of the turret. This can also be seen in our photograph (3). This was a common modification seen during the summer of 1944 and although it was almost certainly meant to accommodate the division's unit insignia I have never seen a photograph where the badge was actually applied to the turret as it was to the hull glacis. Note that the removal of Zimmerit from the turret seems to have been restricted to the left side (4) and (5). Note also the bracket on the engine deck used to hold logs or und itching beams (6) and the protective cover on the antenna of the FuG 5 radio (7).

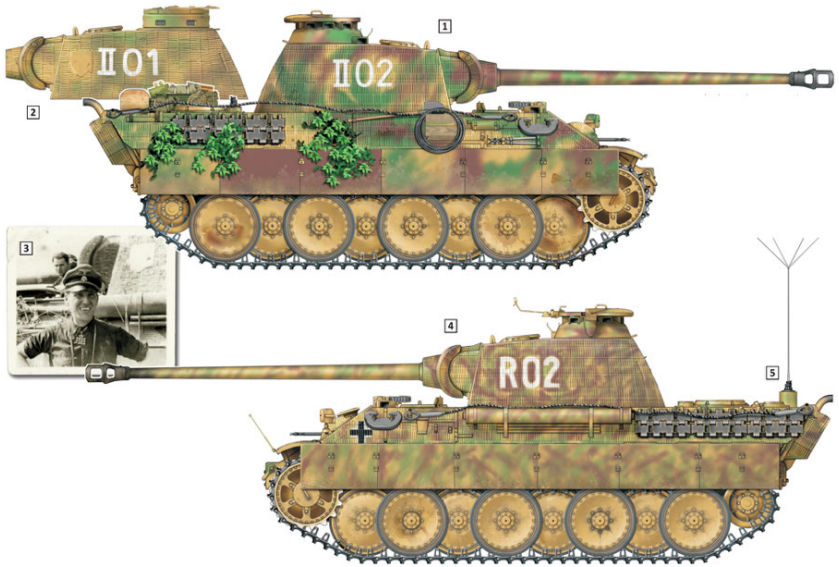


1. Pzkpfw V Panther ausf A. 8. Kompanie, SS-Panzer-Regiment

5. Poland, spring 1944. Commanded by Obersturmführer Karl Nicolussi-Leck, who led the company throughout 1944, this tank was photographed in late April, during the fighting on the east bank of the Bug between Kovel and Chelm. The date of the photograph on which our illustration is based is confirmed by the presence of a number of vehicles of 4.Panzer-Division.The camouflage pattern, made up of broad bands of colour, would seem to have been common at this date and this was probably how this tank appeared when it arrived in Poland in March, although a coat of removable whitewash would have been added at that time.

2. The same vehicle was photographed some four months later in August, in the area to the east of Warsaw. The most striking difference is the camouflage scheme which is now a soft mottling of Olivgrün and Rotbraun over the Dunkelgelb base colour. Note that the tank's company number, although identical in style and size, is not in the same position. This was also applied to the turret rear (3). A shield-shaped patch of Zimmerit has been scraped away on both the turret (4) and hull front and on the latter, the division's unit insignia has been painted in white. This is just visible in our photograph (5). I have been unable to find a single instance of the shield motif being applied to the turret side although many tanks were given the appropriate space.

This tank was fitted with the later style exhaust system and horizontally-placed 20-ton jack.



1. Pzkpfw V Panther ausf A. Stab, II. Abtei lung, SS-Panzer-Regiment 5. Poland, August 1944. This tank of the battalion headquarters is painted in the camouflage scheme of broad swathes of colour more commonly seen earlier in the year. Of note is the bracket on the rear hull used to secure the unditching beam. Note also the mixture of early and later style wheels. Photographed at the same time was Panther 1101 (2). The alteration of the Zimmerit paste on the turret side was evident on many of the battalion's Panthers by July but this tank has not had a patch removed, as was the case with most vehicles, but rather fresh Zimmerit has been added, as can clearly be seen in the accompanying photograph (3).

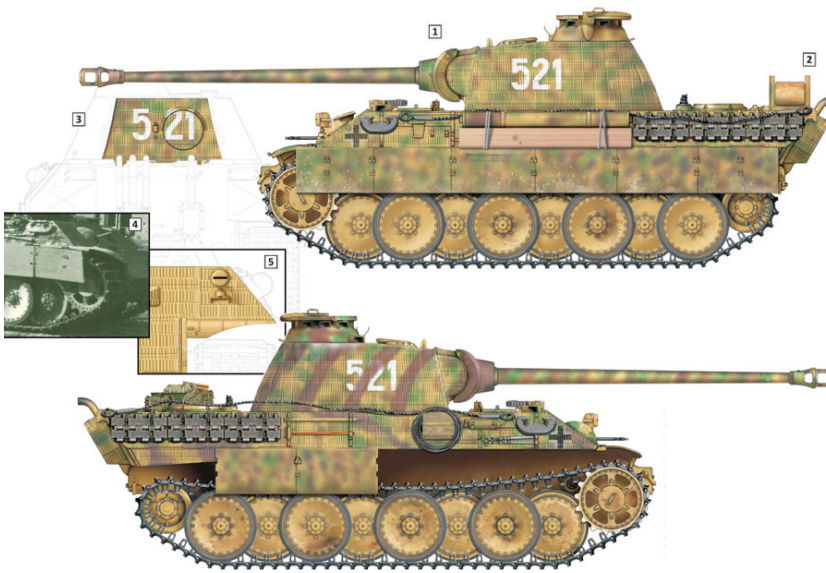
4. Befehlspanzerwagen V Panther ausf A. Stab, SS-Panzer-Regiment 5. Poland, August 1944. Almost every available photograph of this tank shows the regiment's commander, Obersturmbannführer Johannes Mühlenkamp, in the cupola although a command tank numbered R01 is known to have existed. During the relief of Kovel, the tank commanded by Mühlenkamp was disabled by a mine just outside the city in the early hours of 5 April 1944 and could not be recovered for two days. It is possible that the disabled tank was R01 and that

until it could be repaired Mühlenkamp adopted his adjutant's vehicle and apparently retained it for some time. Note the Sternantenne D aerial in its armoured cover on the rear deck (5). This vehicle is also shown in the photograph on page 56.

1. Pzkpfw V Panther ausf A. 5.Kompanie, SS-Panzer-Regiment 5. Poland, August 1944. Photographed during the fighting east of Warsaw, this tank is painted in a very unusual, for the time, hard-edged camouflage scheme, departing from the more common soft mottled pattern which seems to have been common to this battalion by the summer. Interestingly, an earlier model Panther ausf A with the same company number was photographed near Maciejow in April 1944.

2. Pzkpfw V Panther ausf A. S.Kompanie, SS-Panzer- Regiment 5. Poland, spring 1944. Note that although the photograph on which our illustration is based was taken in May, this vehicle does not have the bracket on the hull rear and also retains one of the large mudguards. The scrappy application of camouflage paint is typical of this company's tanks and Panther 625 (3) has been almost completely covered in dark shades of paint

without regard for either the turret number or the Balkenkreuz national insignia on the hull front. Panther 632 (4) features an almost identical camouflage scheme to that shown on Panther 611 but the turret number has been hand painted. This tank carried an unditching beam on the rear hull although the bracket has yet to make its appearance.

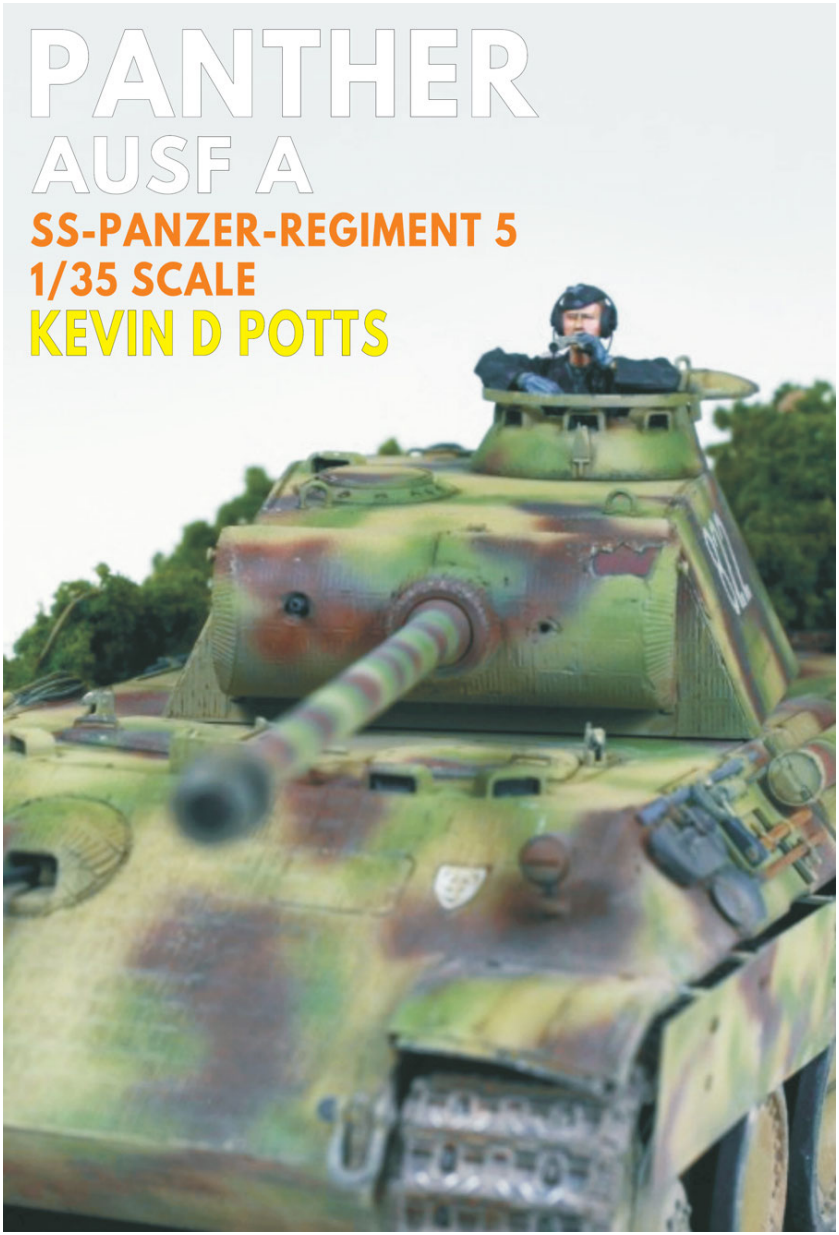


1. Pzkpfw V Panther ausf A. 5.Kompanie, SS-Panzer-Regiment 3. Poland, summer and autumn 1944. Commanded by Untersturmführer Horst Neimann, Panther 521 was one of the most photographed vehicles of the battalion, enabling us to be quite sure about its appearance. In common with most of the battalion's tanks, a bracket has been welded to the rearhull (2) to holdthe large unditching beam which was an essential piece of equipment in the sandy soil of eastern Poland. An additional beam is attached to the hull side.

The company number was repeated on the rearof the turret (3) andthistankwas fitted with the later style exhaust and 20- ton jack held horizontally. Note also the alteration to the front mudguards (4) and (5), a modification which seems to have been common to

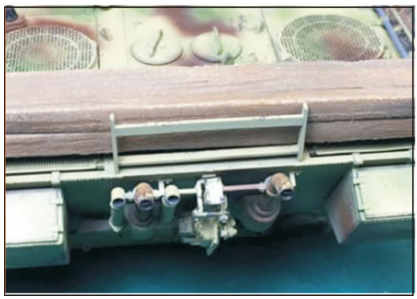
the tanks of this company. The reason for this is unclear but it may have assisted access to the hull. Featured very briefly in a newsreel film made later in the year, Panther 521 has been hastily painted with bands of a dark colour (5), probably Rotbraun. Note that the bracket for the unditching beam is missing.

MODEL SHOWCASE



Kelvin's model, with the hull and turret complete and with the Dunkelgelb base coat and minor weathering applied. I was very pleased, and quite, to find that Kevin based his replica on the profiles and photographs from one of my earlier books.

The finished replica, based on the Meng Model 1/35 scale offering, completed as a vehicle of 8.Kompanie, SS-Panzer-Regiment 5. Note the accurately depicted unit insignia on the hull front next to the driver's visor and the style of the company number.

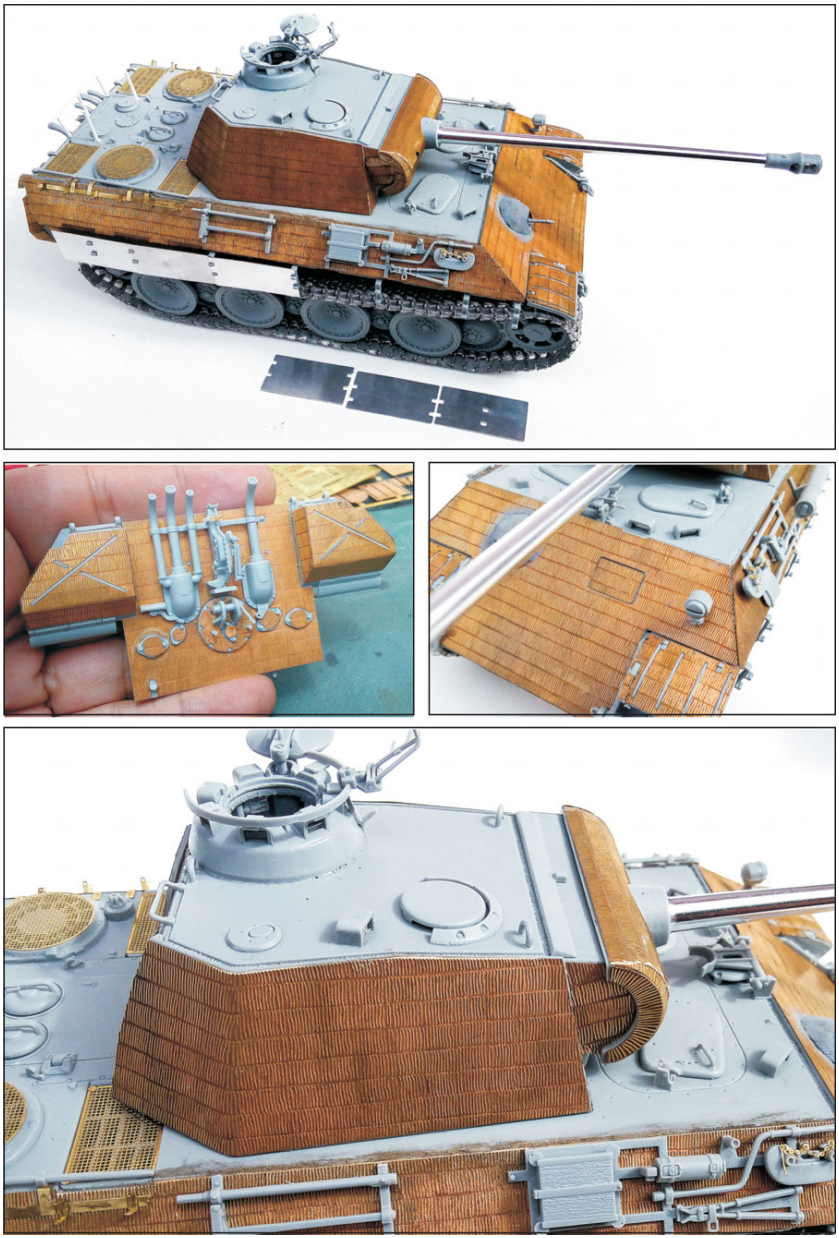


Another view of Kevin's Panther ausf A with a number of close-up shots below. The rack on the rear engine deck and unditching beams were replaced by scratch-built versions. Sheets of thin plastic are provided with the kit to simulate the various textures seen in Zimmerit application

but must be carefully measured and then glued to the turret and hull. The completed build was first primed in black and then painted in Dunkelgelb and Rotbraun shades from Mig Productions and Olivgrün from Acrylicos Vallejo.

PANTHER
AUSF A
SS-PANZER-REGIMENT 5
1/35 SCALE

THEODOROS KALAMATAS



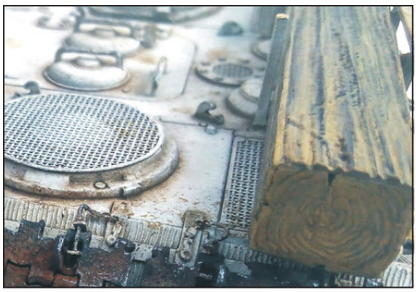
Theo's Panther ausf A is based on the Dragon Models' Late Production kit. A glaring omission from Dragon's offering is the Zimmerit coating which was applied to most, if not all, these tanks. Theo used the Eduard Model Accessories photo-etched Zimmerit but as it is made specifically

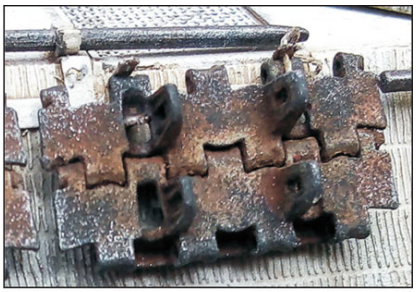
for another manufacturer's replica, an substantial amount of cutting and reshaping was involved. The metal barrel is included in the kit as are the individual hull Schürzen plates.

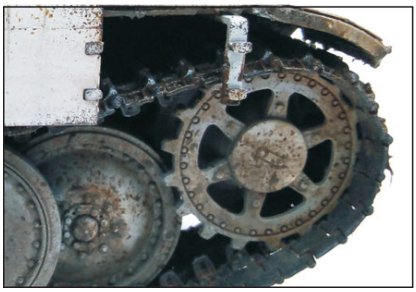
Theo's completed model after painting and weathering. The style of marking depicted here was only used by 8.Kompanie during April 1944, when the tanks were fighting around Kovel in Poland. Although the colour of the turret number is the subject of some debate, both Theo and myself are satisfied that it was probably rendered In black.

Details of the completed Panther ausf A including the cast cupola, single headlight, tool storage and hull Schürzen bracket. Note the subtle weathering on the Schürzen with parts of the Dunkelgelb base coat showing through.

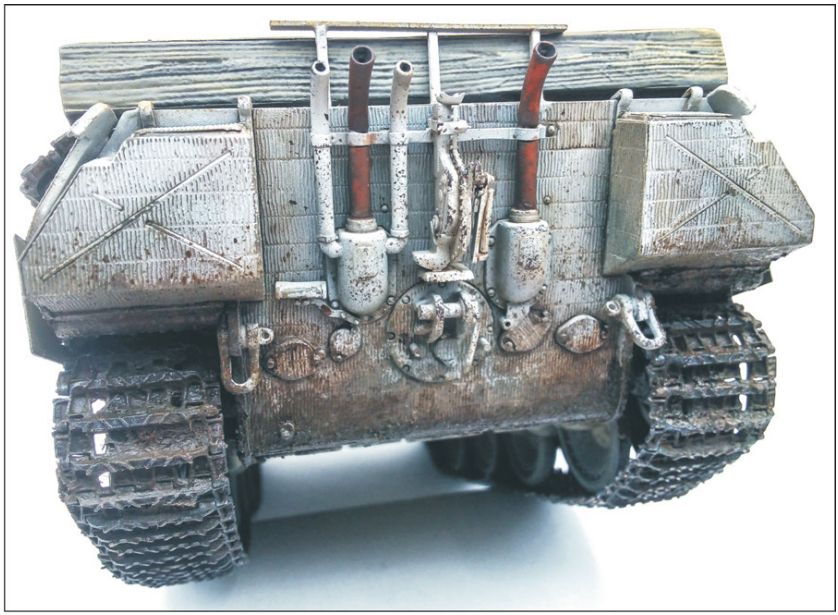
Another view of the Panther ausf A showing the company number repeated on the turret rear and the large unditching beam which many of the regiment's tanks carried.







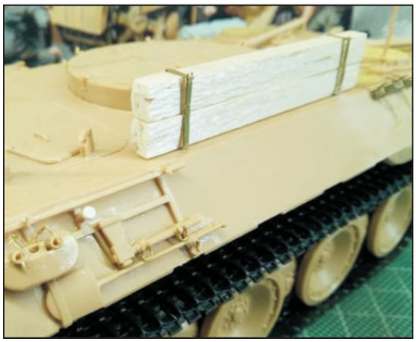
Further details showing the air intake grills, which are supplied with the kit, unditching beam, spare track links and drive sprocket. Although the initial painting was completed with an airbrush, all the smaller parts such as tools, tracks and the wooden beam were finished by hand.



A rear view of the completed hull showing the later-style exhaust mufflers, the vertically placed jack, towing pintle and Friulmodel tracks. The extensive but realistic weathering and mud coating was painstakingly applied using a fine brush as shown below.

BERGEPANTHER
AUSF D
SS-PANZER-REGIMENT 5
1/35 SCALE
THEODOROS KALAMATAS

Both SS-Panzer-Regiment 3 and SS-Panzer-Regiment 5 had a small number of these recovery tanks on hand during the summer of 1944 and Theo's model represents a vehicle allocated to the Wiking Division. It was built using the ICM kit, at right, which was first released in 2006.



The assembled model ready for painting. The photo-etched parts are from Eduard Model Accessories and Aber of Poland. The wooden beams were cut from Balsa.

Views of the painted and weathered model including the wooden crew access hatch, which replaced the turret, unit insignia and tool stowage. Readers wishing to build this model should be aware that the large metal brackets in front of the driver's and radio operator's hatches, which are

an integral part of the kit, need to be removed as they have been here. This model was re-boxed and released by Revell in 2013. Theo is available to work on modelling commissions and his contact details can be found on page 64.

PANTHER
AUSF A
SS-PANZER-REGIMENT 3
1/35 SCALE
STANISLAV NOSKOVIC

Stanislav's replica is based on the Dragon Models' Panther ausf A Late Type Normandy 1944 kit, first released in 2004. The coating of Zimmerit, which is almost essential for this version of the Panther, is from Cavalier Model Productions and comes in very thin resin sheets.

The realistic effect can be seen from these photographs.

The completed model finished in the markings of 1. Kompanie, SS-Panzer-Regiment 5. The metal gun barrel is from RB Model, a Polish manufacturer of detail and upgrade sets that has been featured in a number of books in this series. Replacement barrels for the 8.8cm gun were delivered unpainted but coated in a heat-resistant lacquer that was almost black in colour and many were left in this condition as depicted here.

Small photo-etched parts such as the tool clamps and handles are from Eduard Model Accessories and Voyager Model. The tracks of the Dragon kit were replaced with the workable Panther tracks from Bronco Models which are highly detailed and quite affordable.

A rear view of Stanislav's Panther ausf A. Note the triangular marking on the turret rear access hatch. This tank and its markings are shown and discussed on page 17 of the Camouflage & Markings section of this book.

Details of the hull front, rear and turret. Note that the Totenkopf Division unit insignia next to the Kugelblende machine-gun mount is repeated on the rear stowage bin.

The completed model on its plaster base. The images at the bottom of the page show a detail of the base including the wooden supports of the trench and an assortment of weapons and other equipment. All the figures, including the infantryman in the trench, are from Alpine

Miniatures.

MODELUNG PRODUCTS

Together with the Tiger tanks, the Panther is arguably one of the most famous armoured fighting vehicles produced during the Second World War. In 1961, Tamiya and Airfix both released their first plastic models of the Panther, in 1 / 35 and 1/76 scale respectively, and replicas of this large powerful tank have been a favourite with modellers ever since. Though these early kits could be generously described as basic, they were affordable and easily obtained, and deserve to be credited with creating the market and demand which has led to the highly detailed products modellers enjoy today. Although the Tamiya model has long since been superseded by more detailed and accurate representations, the Airfix kit is still available and the company has recently announced the release of a 1 /35 scale Panther ausf G. The last few decades have seen a boom in the plastic model industry and kits of the Panther are currently available in sizes ranging from 1 /285 scale wargames tanks to massive 1/6 scale radio-controlled vehicles. As a consequence there are far too many to list here individually and, as with the other books in this series, I have chosen to concentrate on the most popular modelling scales of 1/35 and 1/48. Similarly, as many of the currently available kits and accessories are covered in Panther Tanks: German Army and Waffen-SS Normandy Campaign, 1944, Panther Tanks: German Army and Waffen-SS Defence of the West, 1945 and Panther Tanks: German Army Panzer Brigades Western and Eastern Fronts, 1944-1945 I have chosen to expand the Model Showcase section of this book and reduce the number of pages that would normally make up this chapter. Finally, the reader should note that for this chapter I have used the word Type in place of the more correct Ausführung, as at least one major manufacturer does, solely to avoid confusion. An index of manufacturers, with their contact details, can be found on page 64.

DRAGON MODELS LIMITED

Dragon Models was one of the first of the major manufacturers to offer accurate replicas in 1/35 scale and their kits are today something of a benchmark. The company's small scale releases are some of the best available. At the time of writing this Hong Kong-based company offered seven construction kits in both 1/35 and 1/72 scale representing variants of the Panther tanks in service at the time of the Normandy campaign including a Type D, a Type A and an early Type G, all with Zimmerit texture. Also produced in 1/35 scale are a later Type G and a Befehlspanther Type G which could, with some alteration, represent tanks fighting with the Panzerwaffe in June 1944, although command tanks based on this model would have been rare at the time. The smaller scale kit of the early Type G includes a number of well detailed and anatomically correct crew figures. In addition to these, Dragon produces a pre-painted early Type G in 1 / 72 scale although the model lacks Zimmerit, which was a standard feature in the summer of 1944, and is finished in markings that are somewhat dubious. Dragon Models has also released a late production Panther Type A kit in 1/72 scale which would be entirely appropriate for the period covered by this book.

Dragon Models 1/35 scale kits suitable for the units mentioned in this book. The company also offers an early Panther Type A.

The late model 1/35 scale Panther Type A kit built with the photo-etched brass and aluminium accessory set from Eduard Model Accessaries. Note that the marking options for this kit, shown at right, include vehicle both SS-Panzer-Regiment 3 and SS-Panzer-Regiment 5.

TAMIYA INC

By the early 1970s Tamiya was producing a large range of armoured vehicles and was almost solely responsible for the rise in popularity of 1 /35 scale. Although rudimentary by today's standards, these kits were highly accurate and detailed when compared to what was available at the time. Importantly, they were

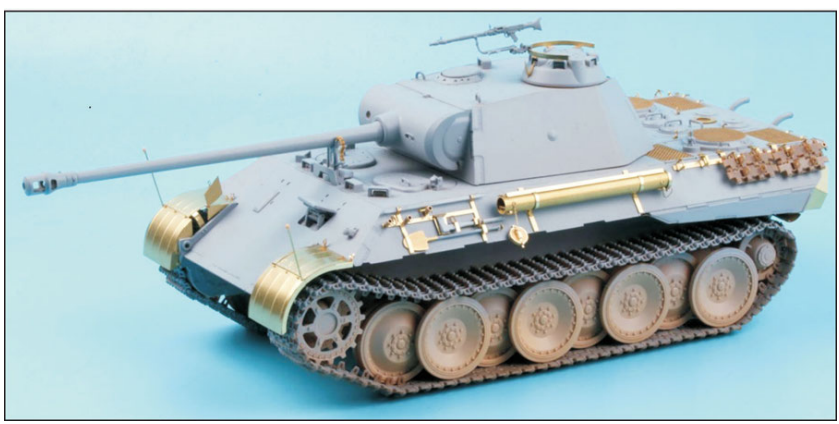
all made to the same scale, a concept which the early British manufacturers had pioneered, encouraging modellers to build a collection. The company's near monopoly of the 1/35 scale market remained unchallenged until the release of the first Dragon Models kits in 1987. The current catalogue lists a Type A, which is an older kit lacking some detail and features of the newer releases, an early Type G, in both a static and motorised version, an early Type G with a photo- etched Zimmerit stencil and the recently released early Type D which could be converted to a later version with minimum effort. In 2003 Tamiya began releasing a series of models in 1/48 scale and this line has been extremely successful for the company, combining the potential for a high level of detail without the expense of the bigger kits. Tamiya has recently released a Panther ausf D in this range.

Tamiya's 1/35 scale early Panther Type G kit. This model comes with separate sheets of Zimmerit texture and is motorised.

A detail of the recently released Panther Type D in 1/35 scale. Although this kit 9H depicts a tank at the time of the Panther's debut at the battle of Kursk, many early models were still in service in 1944, particularly with SS-Panzer-Regiment 5. This model would require the addition of Zimmerit.

TRUMPETER/HOBBY BOSS

Often thought to be separate entities, these Chinese companies are in fact owned by the same corporation, are located at the same address and are essentially the same firm although different models are marketed separately under the two labels. Hobby Boss produces a 1 /16 scale early production Panther Type G, which actually depicts a tank assembled in September or October 1944, and a Panther Type A with Zimmerit in 1/35 scale. The 1/35 scale Panther Type D Flak Bergepanther model utilised the hull and suspension of the Panther Type A kit fitted with a 3.7cm gun.



The Trumpeter/Hobby Boss Panther Type A in 1/35 scale built with the photo-etched brass upgrade set from Tetra Models. Zimmerit is supplied with the kit, in a pattern very similar to that seen on DEMAG- assembled vehicles, in the shape of fifty-one thin plastic sheets.

ITALERI

At present this Italian company's catalogue contains a Panther Type G, a later model, a Panther Type D and a Panther Type A in 1 /35

scale. In 1/72 scale Italeri produces a Panther Type G in their Fast Assembly range, the kit containing two models comprising just ten pieces each. Of the large model manufacturers Italeri alone has ventured into 1/56 scale with a Panther Type A kit. This scale complements 28mm wargames figures of which there are now quite a number on the market.

Italeri's Panther Type A kit. First released in 1993, this model has recently been reboxed and was also released by Zvezda. The 1/56 Panther Type A with Zimmerit texture. This version was the most common Panther with SS-Panzer-Regiment 3 and SS-Panzer- Regiment5 in 1944. The 1/35 scale Panther Type A completed with the detail set from Eduard Models made specifically for this kit

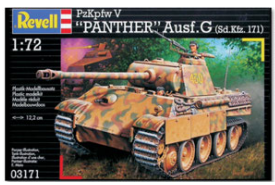
AIRFIX

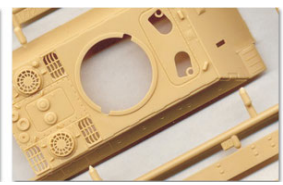
No list of scale model Panther tanks would be complete without at least some mention of Airfix. This British company's 1/76 scale Panther, a Type G model, was first released in 1961 and although the box art may have been altered over the years, the kit itself remains unchanged and still includes the soft rubber-like tracks that have bedevilled generations of modellers. Shown at left is the kit in its various incarnations.

Released almost 60 years after the company's first Panther model, the current 1/35 scale offering from Airfix is in fact a joint effort with Academy. The kit features parts to build an earlier or late production vehicle and comes with photo-etched details but makes no provision for Zimmerit. The tracks are individual links. The later production version is shown here with reinforced gun mantlet, raised crew compartment heater and Flammen vernichter mufflers.

REVELL

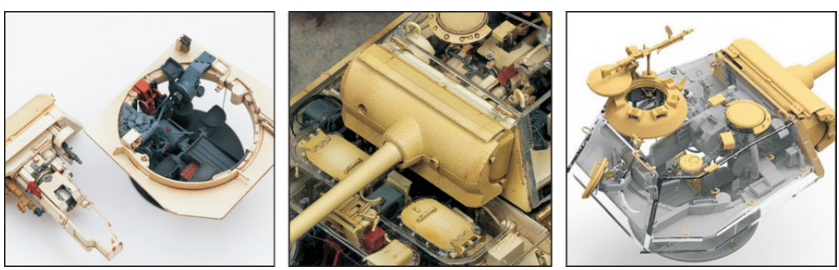
Like Airfix, this company has gone through many changes of ownership over the years since its founding in 1943, at one time operating as two distinct entities in the US and Germany. The company's current catalogue shows the 1/72 Panther Type A and Panther Type G shown here. Although these are both good kits, readers should be aware that the commander's cupola should have seven periscopes and not six, an inexplicable error in otherwise accurate models. The 1/35 scale Panther Type D, released in 2013, is a re-boxing of the Italeri kit some new parts.





RYE FIELD MODELS

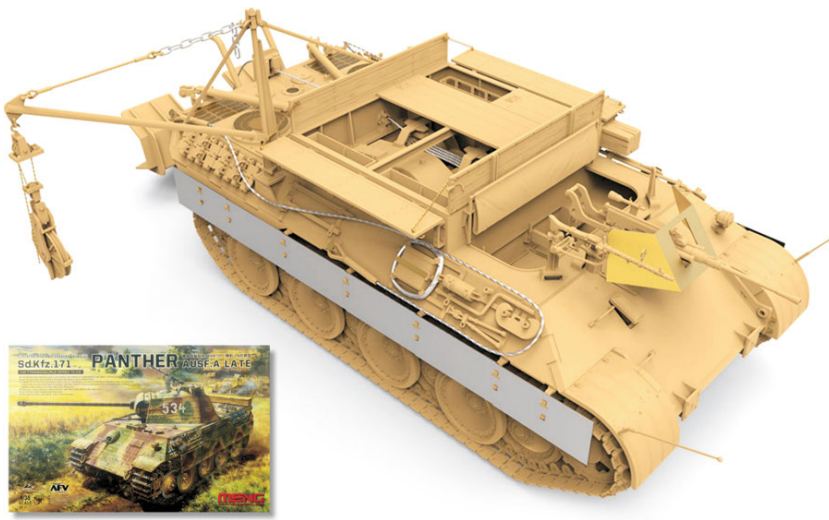
Based in Hong Kong, this company released its first armour models, three highly accurate and detailed kits depicting Tiger I variants, within the short space of six months from late 2015. Rye Field Models also offers a Panther Type D and a Panther Type G, the latter being a very recent release. Both can be built as early or late production vehicles and the Panther Type G contains over 1,500 plastic parts, 196 photo-etched parts and 190 individual track links and track pins. The kit also contains a number of optional clear plastic parts to allow the detailed interior to be viewed. Shortly after the release of this model a cheaper, less detailed, version was marketed at a considerably reduced price. It seems strange that some kind of Zimmerit coating is not included with either model although the marking options allow for a vehicle in service during the summer of 1944.



Details of the Panther Type G kit from Rye Field Models with full interior option. Although the company maintains that this model can be built as an early production version, the addition of Zimmerit paste would be required to more accurately represent a tank assembled prior to early September 1944.

MENG-MODEL

This Chinese company largely specialises in modern armour but also produces a number of Second World War subjects including a Panther Type A and Panther Type D, the latter with and without Zimmerit. The box of the Panther Type D also carries the logo of the Bovington Tank Museum, implying their cooperation, although I have been unable to confirm this. As I have mentioned in a previous book, a visit to the company's website, as with many Chinese model manufacturers, can be an exercise in frustration with the products listed here under the names of various dinosaurs. Meng also offers sheets of Zimmerit texture in the patterns employed by MAN and MNH in 1/35 scale for the Panther Type A.

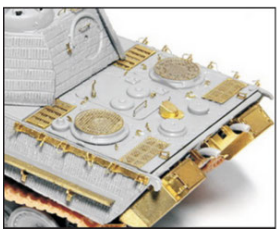


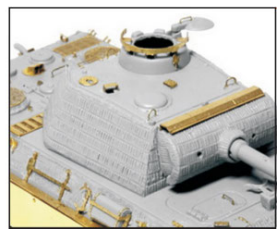
The 1/35 scale Panther Type A model. The large beam, held in place by a metal rack, on the rear deck was indicative of the tanks of SS-Panzer-Regiment 5 and markings are also provide for that unit.

Meng-ModeTs recently-released Bergepanther recovery tank in 1/35 scale. The 3.7cm anti-aircraft gun, positioned on the hull front, is rarely seen in contemporary photographs.

E.T. MODEL

This company, based in China, produces upgrade stowage bin, are referred to as universal. Shown sets in 1/72 and 1/35 scale in brass and resin, below is the Dragon Models'1/72 scale kit built with Although most sets are specifically designed, E.T. Model's upgrade set. Penny Shi, a modeller who according to the company, to fit Dragon or Tamiya works for this company, is a frequent contributor to kits, some parts or accessories, for example the this series.



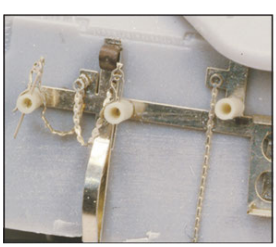
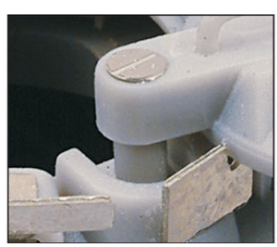
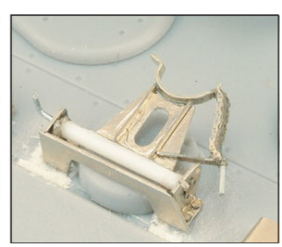


EDUARD MODEL ACCESSORIES

Founded in 1989, this Czech company produces high quality upgrade kits in photo-etched metal and resin and a number of scale models. Currently available are extensive photo-etched detail sets to update the Tamiya Panther, including sets of Zimmerit produced in the patterns typical of MAN and MNH-manufactured vehicles, the Zvezda Type D and the Dragon Type G and late Type A. The company also offers vinyl masks to aid with painting the roadwheels. The recently-released Type G kit from Tamiya includes a photo-etched Zimmerit set from Eduard.

ROYAL MODEL

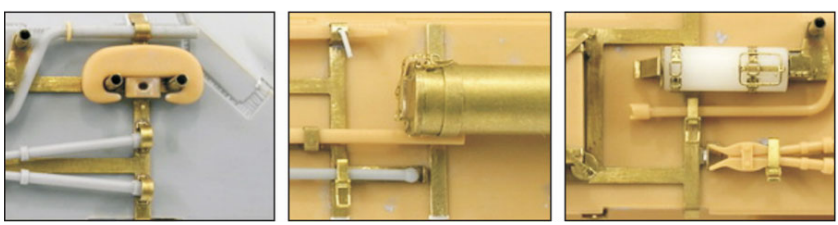
This Italian company has been producing high- quality accessories and aftermarket parts since the early 1990s under the guidance of its founder, Roberto Reale. The catalogue includes complete upgrade sets in photo-etched brass and resin for both the Dragon early and late Type A, the Tamiya Type G and the Italeri Type A, all in 1/35 scale. Royal Model also offers photo-etched brass hull Schürzen for the Type A and Type G which are appropriate for all 1 /35 scale kits. Other 1 /35 scale items include two interior detail sets for the Type A and photo-etched Zimmerit for the Type A, either factory fresh or damaged. More generic parts in resin and brass are an engine transmission, detailed rear stowage bins, engine grills and a Kugelblende machine-gun mount.

Examples of the very high standard of detail incorporated into Royal Model's 1/35 scale upgrade sets. Shown here are the tool bracket for the hull left-hand side, the locking mechanism of the commander's cupola hatch in the open position and the gun travel lock fora Panther Type A or Type D.

ROCHM MODEL

This company is owned and managed by master modeller Sheng Hui whose work has appeared in a number of books in the TankCraft series. Initially specialising in 1 /35 scale detail sets in resin, photo- etched brass and aluminium for the Tiger I, the company moved on to the Tiger II series and then the Panther currently offering forty-five different upgrade sets as part of a program titled Evolution of the Panther which is intended to continue into the a very last production models. Primarily intended for y the Meng, Dragon and Zvezda models, many of the - parts would of course be suitable for most 1/35 e scale kits. Rochm Model's products offer i exceptional detail and considering the quality, are t reasonably priced. Detail sets in 1/48 and 1/72 scale are currently in the planning stage.

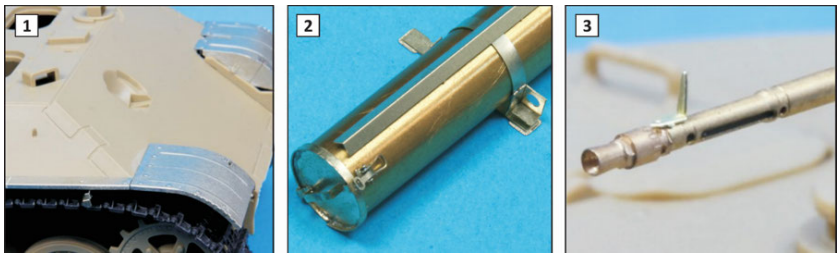


A selection of resin and photo-etched brass details including tool clamps, a fire extinguisher and gun cleaning rod housing for early and mid-production Panther Type A tanks in 1/35 scale.

ABER

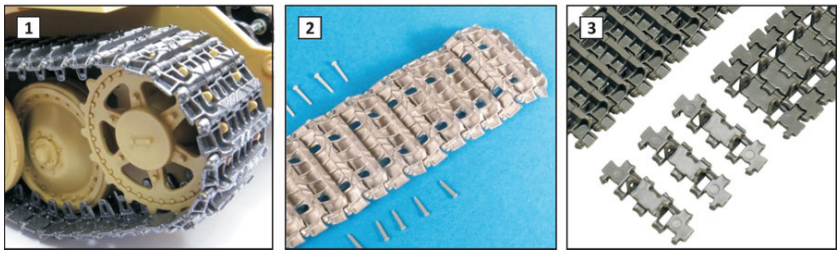
For some time now Tamiya has included a number details on page 64. Shown below are: 1. Parts of the of Aber products with their models. A full list of the hull side fender and front mudguard set for

a accessories made specifically for the Panther in all Panther Type G. 2. The tube used to house the gun scales would be far too large to reproduce on this cleaning rods for a Panther Type G. 3. The barrel for page and the reader can find the company's contact the hull MG 34. All items are in 1 /35 scale.



AFTERMARKET TRACKS

Most plastic kits today contain realistic tracks made from a form of vinyl which, unlike the older types, can be glued together or hard plastic individual links. Nevertheless, there are many modellers who wish for the highest level of detail and realism possible and consequently the number of quality aftermarket products available seems to have increased in recent years, despite the extra expense and work required. In order to operate properly, motorised models require workable tracks made up from individual links held together by pins, as were the full-size items.



1. Kaizen plastic 1/35 scale Panther and Jagdpanther late type Kgs

64/560/150 workable tracks available from MS Models, Japan. 2. MasterClub 1/35 scale late Panther tracks. 3. Tamiya's 1/35 scale workable Panther tracks in plastic.

TECHNICAL DETAILS AND MODIFICATIONS

Like most weapons systems the Pzkpfw V Panther was subject to a series of modifications throughout its production life in an effort to increase the tank's performance in combat and to simplify production. In addition, a number of features were completely redesigned to remedy technical and mechanical difficulties which bedevilled the design throughout its existence.

The most common variant in service with the two regiments which are the focus of our study was the Panther ausf A and although this model was covered in some detail in Panther Tanks: German Army and Waffen-SS Normandy Campaign 1944, the third book in this series, I have included much of that information here. The Panther ausf A was manufactured by the firms of Maschinenfabrik Augsburg-Nürnberg AG (MAN), Daimler- Benz, Maschinenfabrik Niedersachsen Hanover (MNH) and Deutsche Maschinenbau-Aktiengesellschaft (Demag) with production beginning in August 1943 and ending in July 1944. This was the period when both regiments received most of their allocated Panther tanks. While photographic evidence shows that a number of Panther ausf D versions were used, for the most part by SS-Panzer-Regiment 5, they were relatively rare and I have only covered this model briefly as it will be dealt with comprehensively in a future title, Panther Tanks: German Army Medium Tank, Eastern Front 1943.

When the Panther II project was postponed, and eventually abandoned, many of its simplified design aspects were incorporated into the chassis of the Panther ausf G and series production began in March 1944 and continued until the end of the war at MNH, MAN and Daimler-Benz. As it is known that SS-Panzer-Regiment 3 received a number of these tanks I have included the modifications up to July 1944 when the last shipment was made. The later modifications made to the Panther ausf G are covered in TankCraft 18 Panther Tanks: Germany Armu and Waffen-SS Defence of the West, 1945.

August 1943. The first Panther ausf A models leave the assembly plants. In the same month, operational units were ordered to replace the 16-bolt road wheels with the newer 24-bolt versions.

September 1943. The manufacturers were ordered to apply a coat of Zimmerit anti-magnetic mine paste to all vehicles as part of the assembly process. The exact date that this order was put into effect is unknown and photographs exist of vehicles completed at the beginning of October that do not have Zimmerit, suggesting that some firms at least may have had difficulty obtaining sufficient quantities of the paste. Production of the Panther ausf D ends.

November 1943. A ball mount for the hull machine gun, referred to as the Kugelblende (1), was incorporated into production. As the new mount contained a sight for the machine gun it was felt that the radio operator's forward-facing periscope was now superfluous and it was no longer fitted. The binocular T.Z.F.12 gun sight was replaced by the monocular T.Z.F. 12a version. Until supplies of single-aperture gun mantlets were available the second, outer sight aperture was sealed with an armoured plug although these vehicles retained the wider rain channel.

A number of tanks produced in November and December were fitted with a towing coupling bolted onto the hull rear plate along the lower edge below the engine access hatch. This was identical to the coupling fitted to the Bergepanther recovery vehicle. As this interfered with ground clearance it was soon dropped from production and although the number of tanks actually fitted with the coupling was small, most Panther ausf A models manufactured

up to April 1944 had the necessary brackets and holes, the latter sealed with four bolts. Units in the field were ordered to apply Zimmerit to those tanks which had not received a coat before leaving the factories.

Notes

1. It was at one time thought that this modification was a distinguishing feature of the Panther ausf A but more than 600 examples of the new tank may have left the factories before its introduction.

December 1943. The small pistol ports, referred to as MP Stopfen, on either side of the turret were dropped from production. It was intended that these be replaced by the Nahverteidigungswaffe, or close defence weapon, which was to be mounted in the turret roof, could be traversed through 360 degrees and was capable of firing smoke candles, grenades and flares. A hole was cut in the turret roof, to the right of the cupola, into which the Nahverteidigungswaffe was meant to be fitted but due to difficulties with supply none were available until March 1944 and the turrets of many Panther ausf A models assembled in February and March were instead fitted with a circular plate covering the hole and held in place by four bolts.

January 1944. Two cooling pipes were added to the engine exhaust manifold on the left-hand side. Until recently it was thought that some vehicles may have had the cooling pipes fitted to the right-hand side manifold but it has since been shown that this was an error made in the restoration of a museum exhibit.

February 1944. A vertical mount for the 20-ton jack replaced the previous horizontal arrangement which held a 15- ton jack. Beginning in February, a towing coupling was welded to the engine access hatch on the hull rear plate although MNH Panthers were assembled until mid-April with the old access hatch.

March 1944. The first production models of the Panther ausf G were completed. In fact, just two tanks were completed in March and large-scale production did not really begin until the following month when MAN assembled 105 vehicles.

May 1944. To simplify construction, the cast armoured guards that protected the exhaust pipes where they entered the hull were replaced by welded versions.

June 1944. Sheet metal covers were fitted over the exhaust pipes above the armoured guards on the Panther ausf G. These pipes regularly become hot enough to produce a visible glow, making the tank an easy target. In response to complaints from tank crews that the turret rear access hatch could not be opened from the outside, a handle was added. Apparently, unit workshops in the field had been adding this modification for some time. Three sockets, or Pilzen, were welded to the turret roof to accommodate the 2-ton Befehlskran jib boom (1).

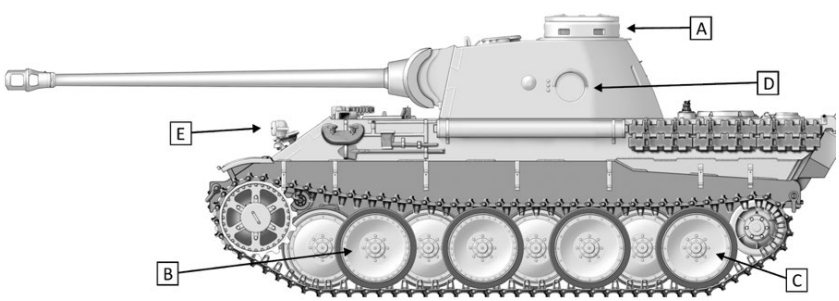
July 1944. It was found that the periscopes fitted to the commander's cupola were liable to come loose if the tank experienced any violent vibration and, in addition, they were difficult to remove and replace. In this month, a frame and improved fastener were installed. At the same time the

assembly plants were ordered to cease the installation of a mount for an observation periscope, or Sehstab, in the cupola. Both these modifications were essentially internal and are rarely seen in photographs. On 17 July, the decision was taken to drop the air intake cover on the front hull from As mentioned earlier the last allocation made by the Heereszeugamt (HZA) to the two regiments examined here was made on 25 July 1944 when four Panthers were shipped to I.Abteilung, SS-Panzer- Regiment 3 which arrived at the end of the month (2).

Notes

1. These last two modifications were also to be carried out by units in the field and incorporated into the assembly of the Panther ausf A, which was still in production.

2. Although a single tank was taken over by the regiment in Vienna on 8 April 1945, nothing is known about the manufacture of this vehicle but it is unlikely that it was a late production model.

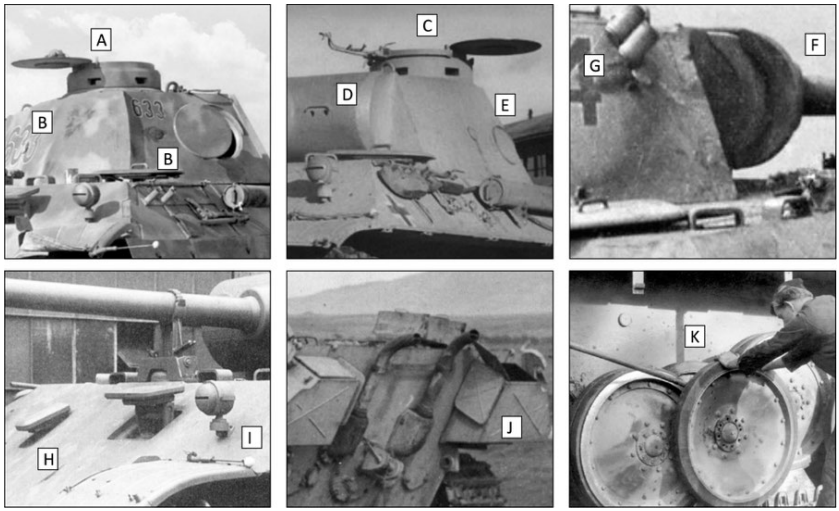


Pzkpfw V Panther ausf D produced after June 1943. The most distinctive feature of this model was the simple, cylindrical commander's cupola (A) which from August 1943 was fitted with a ring mount to accommodate the bracket for an anti-aircraft machine gun. Note that this vehicle has two roadwheels (B) strengthened by the addition of sixteen rivets, a practice that was introduced between June and August

1943. These rivets were of roughly the same size as the bolts and are difficult to differentiate in contemporary photographs. In August, new 24-bolt roadwheels were incorporated into the assembly process which were intended to replace the 16-bolt variants (C) completely but never did. The turret communications port(D) was dropped from production in the same month. Note the single Bosch headlight (E) mounted on the left-hand side of the glacis above the fender. Tanks produced prior to July 1943 were equipped with two headlights on either side of the glacis.

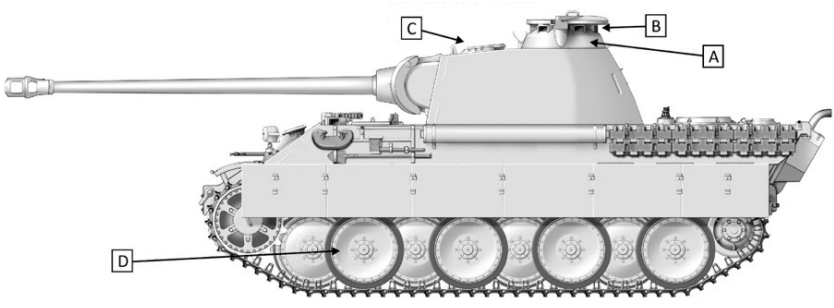
Both images on this page depict Pzkpfw Panther ausf D tanks as they leave the assembly plant. The tanks here were photographed at some time between August 1943, when the rain channel over binocular sight aperture was incorporated into production, and early September when Zimmerit was introduced. Note the full fenders, which were soon damaged or discarded in the field, and the method of securing the main gun in its travel lock.

The vehicles shown here were photographed at some time after July 1943, when a single Bosch headlight was mounted above the left side fender, but before early September when Zimmerit was introduced. The use of this anti-magnetic mine paste was common, if not universal, throughout the period covered by this book and is explained in detail on page 61. Note the lack of a turret ring for the anti-aircraft machine gun mount, the opened driver's visor on the hull glacis and the so-called letter-box machine-gun aperture. Above the latter, on the hull deck, is the radio operator's forward-facing periscope which was dropped from production when the Kugelblende was introduced in the assembly B of the Panther ausf A. All tanks seem to be fitted with the 16-bolt road wheels and early tracks without the chevron-shaped cleats.

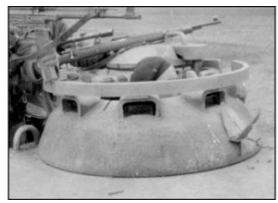


Identifying production details of the Pzkpfw V Panther ausf D. A) The early commander's cupola. B) The small pistol port, just visible here on the turret side, and rear access hatch. Note that the latter does not have an external handle. Note also the rain channel above the hatch introduced Into production in April 1943. C) The ring fitted to the commander's cupola complete with anti-aircraft machine-gun bracket. D) The apertures for the binocular gun sight with rain guard added. E) The communications port with, just visible, the rain channel. This small hatch was not intended as an ejection port for spent 7.5cm rounds as has been suggested elsewhere. F) The gun mantlet of the Panther ausf D model. Compare this with our drawing and the later models shown throughout this book. G) The smoke candle dischargers. Most, if not all, had been removed by 1944. H) The early hull machine-gun aperture, the so-called letter-box opening. I) The single Bosch headlight. J) Heat guards mounted on the side of the stowage boxes facing the exhaust mufflers. These were introduced from May 1943 and fitted until production of this model ended. K) The early, 16-bolt road wheels undergoing repairs.

Note that the welded joints of the turret sides and the hull front plate are squared-off unlike those of the Pzkpfw V ausf D pip which were dovetailed.



A Pzkpfw V Panther ausf A tank produced after January 1944 when the turret side pistol ports were dropped from production. The new version was based on the Panther ausf D chassis with the most obvious change being the inclusion of a completely re-designed cast cupola (A), shown in the photographs below, for the tank's commander which featured seven periscopes each protected by an armoured cowling (B). In addition, a single periscope for the loader was fitted into the turret roof behind the fume extractor (C). The interlocking joints of the turret front and side plates were now squared off, whereas those of the Panther ausf D had been dovetailed, and the cast sides behind the gun mantlet were reshaped to accommodate a new type of seal. This tank is fitted with the 24-bolt road wheels (D) introduced from August 1943 and the Kugelblende machine-gun mount incorporated in November of the same year. All drawings are shown without Zimmerit for the sake of clarity.

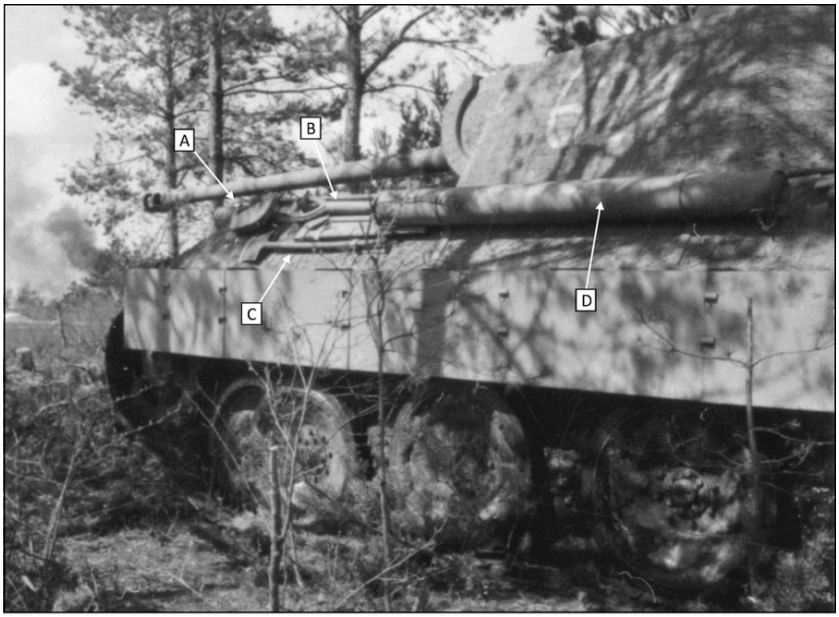


Panther ausf A tanks of 8. Kompanie, SS-Panzer-Regiment 5, probably photographed near Maciejów, south-west of Lodz in western Poland, during the summer of 1944. The three tanks in this image are all fitted with the Kugelblende machine-gun mount which was introduced into production in November 1943. Note that tank 831 has its machine gun in place while the aperture of the Kugelblende of Panther 832 is closed by a metal plug. The latter was attached to the top of the Kugelblende by a chain and could be easliy moved aside from the interior of the tank. The Panther's considerable width meant that the hull Schürzen had to be removed to facilitate rail transportation.

Another Panther ausf A of 8. Kompanie, SS-Panzer-Regiment 5 photographed in western Poland. This tank is fitted with the earlier hull machine-gun aperture and coated with Zimmerit anti-magnetic mine paste in the pattern most often seen on tanks assembled by MAN. By this time most, but not all, the regiment's Panthers had been fitted with a metal bracket, welded to the rear deck, which held either a log or large unditching beam. Note the varying sizes of the turret numbers. The application of these could vary from neat and orderly to somewhat rudimentary.

Changes made to the exhaust manifolds and jack arrangements. A. The exhaust system of the first Panther ausf A tanks were identical to the Panther ausf D (B). Note that the 15-ton jack is fitted horizontally below the armoured exhaust guards. C. The cooling pipes fitted to the left side exhaust. These were first introduced in January 1944. The suggestion that these were sometimes fixed on the right side or that only one pipe was used are incorrect. D. The new 20-ton jack moved to a vertical position. This modification was first carried out by MAN in April

1944 with other manufacturers following suit shortly after. Note that the exhaust of this tank is not fitted with the cooling pipes. E. The towing coupling welded to the engine access hatch. Although this coupling was fitted to a number of Panther ausf A models from April 1944 this tank is in fact a Panther ausf G and the thin sheet metal guards protecting the exhaust manifolds were only fitted to this model. Note the cast armoured guards for the exhaust which were gradually replaced from May 1944 by welded versions (F).



Panther ausf A tanks of 6. Kompanie, SS-Panzer-Regiment 5 probably photographed when the regiment's II.Abteilung was refitting at SS-Truppenübungsplatz Heidelager, the massive training ground near Pustkow in southern Poland. These images provide a good view of the hull fittings including towing hooks (A) and cables (B), tool storage (C) with axe and short-handle spade, gun-cleaning rod tube (D), wooden jack block (E) with track tensioning cable (F) and fire extinguisher (G), the latter just visible between the jack block and the left side towing hook (H). Note the very obvious difference in camouflage, even within the same company, and the turret number of Panther 621 which looks to have been rather hastily applied. The pattern of ridges worked into the Zimmerit coating of tank 621 is typical of Panthers manufacturer by MNH while the Zimmerit of the tank in the lower picture would suggest a vehicle built by MAN. Other photgraphs in this series show that the latter was numbered 625.

On most command vehicles, but not all, three tubes, fixed in a bracket under the gun-cleaning rod housing on the left side of the hull, held the Steckmastrohre, or extension masts, which were used to increase the range of the FuG 8 transmitter.

Panzerbefehlswagen (PzBefWg) Panther Sdkfz 267. Purpose-built command vehicles were based on all models of the Panther. To accommodate the additional radios and GG400/12 auxiliary generator the ammunition stowage for the main gun was reduced to sixty-four rounds and the co-axial machine gun and its mount were not installed. The aperture in the main gun mantlet for the machine gun was filled with a welded plug. In those vehicles based on the Panther ausf A the auxiliary turret traverse mechanism for the loader was deleted but this is of course not visible from the outside. The PzBefWg was fitted with a Funkgerät (FuG) 8 radio which had a range of some 70 kilometres although voice transmissions were usually limited to 25 kilometres. A 1.8-metre Sternantenne D, literally star antenna (A), was mounted on the engine deck and its insulator was protected by an armoured cylinder (B). The standard FuG 5 radio was moved to the turret and an insulator (C) and the 2-metre Stabantenne (D) were fixed to the turret roof. This radio provided tank-to-tank communication. In normal production models the insulator and antenna for the FuG 5 was fitted in a mount on the hull side (E) but this was not used for the command tanks. It is not uncommon to find standard tanks that were converted to command vehicles by unit workshops and in these the Sternantenna D is often mounted on the hull side.

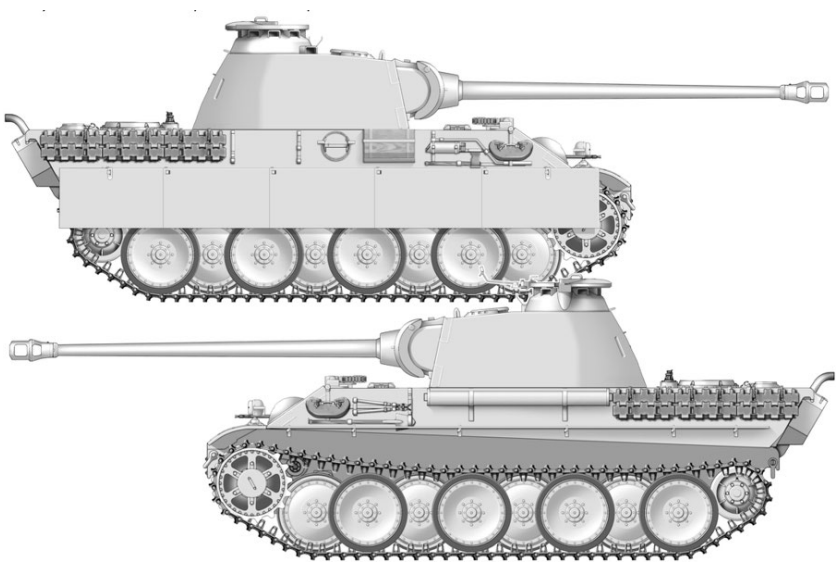
One of six Befehlspanzerwagen V on hand with SS-Panzer-Regiment5 in early1944, this tank is based on the Pzkpfw V ausf D model and is the command vehicle of Obersturmbannführer Otto Paetsch, who led II. Abtei lung until June 1944. The traces of whitewash camouflage suggest that this photograph may have been taken in late April 1944 on the railway embankment on the northern edge of the town of Kovel, which was the only single-line track in the area. Another photograph of this tank is reproduced on the following page. Note the Sternantenna D in its armoured pot on the rear engine deck and the antenna extensions held under the tube for the gun-cleaning rods on the hull side. Both features are identifying elements of these purpose-built command tanks. Seen here, but not mentioned in the illustration on the previous page, are the hull Schürzen, or skirts, which were introduced into production in April 1943.

Obersturmbannführer Mühlenkamp, the commander of SS-Panzer-Regiment 5, photographed in the cupola of Befehlspanzerwagen R02, probably in May 1944. The Sternantenna D aerial for the FuG 8 command radio is just visible behind the open hatch. Note the additional aerial on the turret roof. This photograph also provides a very clear illustration of how the Schürzen were attached to the hull sides. The tank in the background is Panther 800 commanded by Obersturmführer Karl Nicolussl-Leck. These vehicles are also shown and discussed on pages 23 and 24 of the Camouflage & Markings section of this book.

Another view of the Befehlspanzerwagen Panther ausf D of II. Abteilung, SS-Panzer-Regiment 5 shown on the previous page. The number 1101 can just be discerned on the turret side in this view.

The same tank photographed with the battalion commander, Obersturmbannführer Otto Paetsch, in the cupola. Note the armoured cylinder on the engine deck which protects the insulator of the Sternantenne D and the antenna for the FuG5 radio on the turret roof.

The turret of a Befehlspanzerwagen based on a Panther ausf D showing the insulator and antenna for the FuG 5 radio installed on the turret roof. Although it was photographed during the winter of 1944 this tank retains the smoke candle dischargers on the turret side at the front. I should mention that this tank is from neither of the regiments covered in this book but is featured here merely to illustrate the turret fixtures.



A Pzkpfw V Panther ausf G produced in late March 1944 without any modifications. The most distinctive feature of the Panther ausf G was the angled sides of the redesigned hull, fabricated from single plates, clearly visible here. Other modifications are described below. Contrary to some accounts no allocation of these tanks was made to SS-Panzer-Regiment 5 although it is possible, but unlikely, that a small number could have been appropriated from other units in the last weeks of the war. A total

of fifty-eight Panthers were shipped to I.Abteilung, SS-Panzer-Regiment 3 during the second half of July 1944 and as this was the month when production of the Panther ausf A ended and assembly of the Panther ausf G peaked, it would seem safe to assume that a significant number of the latter model were allocated. They were certainly with the battalion headquarters and 3. Kompanie in October.

When it was decided in May 1943 that the Panther II project was to be postponed many of the simplified design aspects were be incorporated into the chassis of e the Panther ausf G (1).

The most distinctive features of the new ‘ model were the angled sides of the hull g made up from single plates. The turret was the same as that used for the Panther ausf A, at least during the period of our study.

Other important differences included:

The driver’s and radio operator’s hatches which were now hinged as opposed to the pivoting versions of the earlier tanks.

The driver’s visor on the glacis was deleted and a periscope with armoured cover (A) was installed on the hull roof in front of the driver’s hatch.

The rear deck, including the louvres and air intakes, was completely redesigned. This was in fact the same format used for the Panther II.

The single Bosch headlight was moved from the glacis to the left fender (B). The two parallel cooling pipes on the left exhaust manifold were dropped from production.

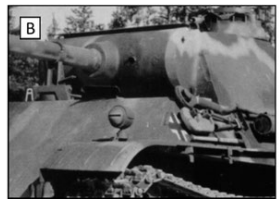
The tool stowage on the hull sides was revised. This can be seen in our drawings above and in the Camouflage & Markings section of this book.

The hull Schürzen were now fixed to an extended fender which ran for much of the length of the hull sides (C).

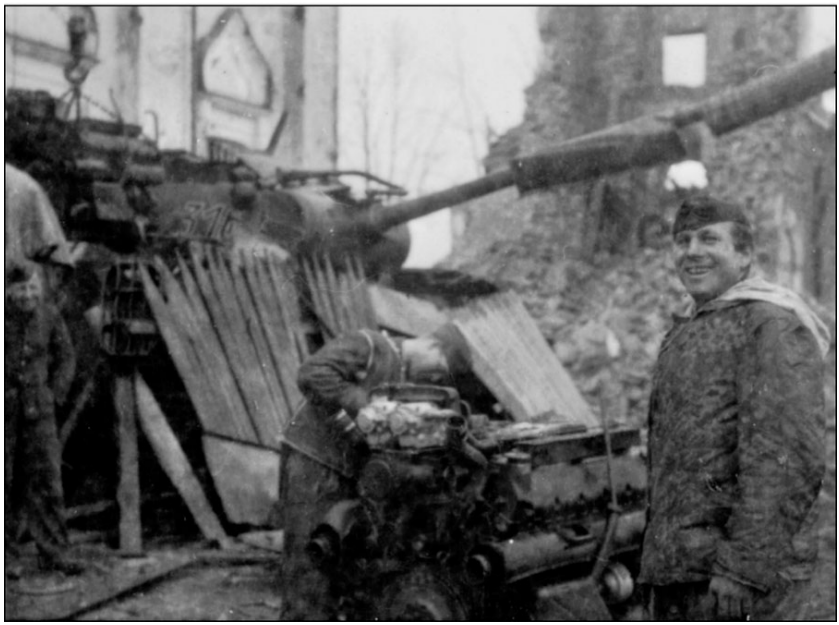
Production of the Panther ausf G was undertaken by MAN, MNH and Daimler- Benz with the first two tanks leaving the factories in May 1944.

Notes

1. The story of the Panther II falls outside the scope of this book and it is sufficient to mention here that it was under development at the same time as the Panther ausf D and its design would, as an economy measure, include parts that were interchangeable with the Tiger II.



A Panzerbefehlswagen V Panther ausf G photographed at some time in 1944, although the debris guard over the gun mantlet identifies this as a post-August production model and therefore somewhat late for our study. The hinged, outward opening hatches for the driver and radio operator are clearly visible here. The pattern of Zimmerit suggests that this tank was built by MAN.



A Panther ausf G of a Waffen-$S unit, Hil possibly 3.Kompanie, SS-Panzer-Regiment 3, undergoing maintenance in late 1944. The I massive bulk of the Maybach HL 230 P30 V- 12 engine is obvious here.

As all Panther tanks assembled between September 1943 and September 1944 were coated with an anti-magnetic mine paste known as Zimmerit, some mention should be made of it here. In addition, the method of application, which left a distinctive texture, could identify a specific manufacturer and this is also explained below.

It was previously accepted that the adoption of Zimmerit into the assembly process was an effort to pre-empt the introduction of magnetic anti-tank grenades by the Western Allies and the Soviets. The Germans had begun issuing their infantry units with a number of these devices, collectively known as Hafthohlladung, from late 1942 and immediately assumed that the Russians in particular, whose tank hunting teams were already having great success with

the weapons available to them, would soon field their own equivalents which would also utilise magnets (1).

But British intelligence reports released since the end of the war indicate that some kind of magnetic mine was already in service with the Red Army and that the officers of the Heereswaffenamt (2) approached the engineers at Henschel und Sohn at Kassel, the manufacturer of the Tiger, with the suggestion that some kind of thick cement could be applied which would neutralise the magnetic properties of the mines and render them useless. Herr Robert Pertuss, the chief engineer at Henschel, stated that a quick-drying compound marketed as Nitro-Spachtel was obtained from I. G. Farbenindustrie and initially applied as an experiment to a single Tiger. It was found that the cement dried and could be painted after only three hours although this time could be reduced by the use of a blowtorch. Interestingly, Herr Pertuss implied that Nitro-Spachtel was used in the assembly of the Tiger until the end of production.

Interviewed in August 1945, the production director and engineers at Henschel stated that the cement applied to their tanks, which they referred to as Zimmerit, was obtained from Chemische Werke Zimmer AG of Berlin (3) in large drums although they assumed that other companies were involved in production as such large quantities were required. Herr Pertuss in particular was quite offended when he was questioned for hours about Zimmerit while the technical advances made by Henschel were largely ignored. The use of the terms Nitro-Spachtel and Zimmerit by the same sources raise the possibility that more than one commercially-available compound was used to give tanks of this period their distinctive textured appearance. Indeed, Pertuss' description of the method of the experimental application of Nitro-Spachtel differs significantly from that laid down for Zimmerit.

Notes

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1. These mines or grenades were attached to a metal surface and held In place by small but powerful magnets until the charge was detonated. The resulting explosion was sufficient to penetrate thin armour or destroy a tank's tracks, effectively disabling it.

2. The Heereswaffenamt (HWA) was the army's procurement and supply office.

3. Since the publication of Panther Tanks: German Army and Waffen-SS Normandy Campaign 1944 in 2019 I have been able to confirm that the company produced an extensive range of sealants and cements and was mostly involved In the construction industry.

A Panther ausf A of S.Kompanie, SS-Panzer-Regiment 5 photographed in western Poland during the summer of 1944. The pattern produced by the application of Zimmerit is typical of vehicles assembled by MAN. Note that the paste has not been applied to the hull Schürzen and also around the tool and track stowage areas.

A clear example of the texture worked into the coating of Zimmerit by Maschinenfabrik Augsburg-Nürnberg (MAN). Note that the Zimmerit at one time covered the fenders.

A Panther ausf A showing the distinctive pattern indicative of tanks built by Maschinenfabrik Niedersachsen Hanover (MNH). The hooks on the turretside are a field modification.

The managers at I. G. Farbenindustrie were interrogated at about the same time and could offer no information about Zimmerit but said that they had heard of Chemische Werke Zimmer AG as quantities of Polyvinyl Acetate had been sold to the Berlin company.

Marketed as Zimmerite, but often spelled as Zimmerit, the thick putty-like paste was found to be made up of mainly of Barium Sulphate and Polyvinyl Acetate (1) with the addition of an ochre

pigment and Zinc Sulphide. The reaction of Barium Sulphate with Zinc Sulphide tends to produce a white colour which would have lightened the ochre pigment somewhat. As a binding agent, ordinary sawdust was added. As delivered, the paste contained a volatile solvent which smelled of acetone which was burnt off during the application process.

The paste was to be applied to all the vertical and sloped surfaces of tanks and assault guns, including the hull sides behind the wheels, to the height that an average man could reach, before the vehicles left the assembly plants. Moving parts and detachable items, such as hinges and tools, were not to be coated as it was expected that the paste would be quickly worn away. Officially, Zimmerit was not to be applied to either hull or turret Schürzen although photographic evidence shows that this order was frequently ignored. The application itself was quite complicated and required two coats and each coat needed to be left to cure for at least four hours.

Once dry the paste became quite hard and it was then heat-treated with a blowtorch and, with special tools, fashioned into a pattern of ridges. It was the resulting ridges which denied the magnets the flat Surface they needed, the paste itself having no inherent anti-magnetic properties.

The application of Zimmerit was instituted in September 1943, although the exact date is not known and may have differed from one assembly plant to another. The use of Zimmerit was suspended and then discontinued on 9 September 1944, although units in the field did not receive the order for almost a month, when it was claimed that the paste was causing, or at least aiding, fires. Interestingly the Allies assumed that Zimmerit was actually a method of camouflage and had no inkling as to its true purpose. As just thirty-seven Panther ausf D models left the factories before production was halted in that same month it is unlikely that many received a coat at the assembly plants (2).

The majority of Panther ausf A models were manufactured between September 1943 and July 1944, which would suggest that almost all would have been coated with Zimmerit during the assembly phase and with Panther ausf G production beginning in March 1944, the first tanks reaching front line units in April, as many as 1,600 production vehicles, could have been coated in Zimmerit before 9 September 1944 when the practice ceased.

It is very unlikely that any Panther tank in service during the summer and autumn of 1944 would not have been coated with Zimmerit. For our purposes the pattern of ridges can, in most case, identify the manufacturer of a particular tank although it should be remembered that exceptions exist to every rule and the following should be taken as a guide only.

Notes

1. Most readers will be familiar with Polyvinyl Acetate as white PVA glue.

2. Most photographs of Panther ausf D tanks coated with Zimmerit, serving in both Russia and France in 1944, seem to indicate that the paste was applied in a very rough, hurried manner, the pattern of ridges being quite unlike those seen on later models.

Further examples of the textures worked into the coating of Zimmerit by manufacturers. At left, a Panther ausf A assembled by Daimler- Benz and, at right, an early production Panther ausf A showing the rather unique pattern which identifies tanks built by Deutsche Machinenbau-Aktiengesellschaft (Demag).

MAN Panthers. The Zimmerit coating was typically made up of short vertical strokes applied with a roller which gave a very orderly and consistent appearance. Over the short strokes or ridges, vertical and horizontal lines forming a grid of about 10 centimetres square were worked into the paste with a pallet knife or trowel. These longer lines were less orderly and could sometimes be applied diagonally, particularly on mudguards and stowage bins but also on the turret sides. On Panther ausf G tanks this pattern was strictly adhered to, with different vehicles displaying the same number of lines on turret sides, hull fronts and other surfaces. Another similar pattern was used, employing a slightly larger roller which left a thicker coat of Zimmerit and necessitated a grid of about 15 centimetres square. That this pattern does not seem to have been applied to surfaces such as mudguards may suggest that it was a later version. Photographic evidence suggests that Zimmerit was not applied to the commander's cupola on MAN vehicles.

MNH Panthers. The coating applied to Panther ausf A models featured a flat, rather smooth application broken up by deeply

scored vertical and horizontal lines which formed a grid. As a general rule Zimmerit was not applied to the mudguards and even the stowage bins were left untreated on some vehicles. Although rare, there are instances of this pattern being extended to the commander's cupola. In July 1944 the firm switched to production of the Panther ausf G and the pattern was changed to horizontal strokes applied with a trowel, the so-called 'ladder pattern'. Over the strokes, a grid of approximately 10 centimetres square was inscribed with a trowel or similar tool. Daimler-Benz Panthers. This pattern was characterised by a rather flat application which was afterwards roughened with short diagonal strokes and photographs show that the roughened Zimmerit was sometimes applied to the commander's cupola. The surface was then broken up by vertical and horizontal lines, again forming a grid, although the grid pattern did not extend to the cupola. The size of the grid varied and could be quite roughly applied, the lines often straying off course. There is some evidence that Daimler-Benz adopted this pattern solely to distinguish their Panthers from those produced by the company's main rival, MAN. With the exception of the initial rough application this pattern was very similar to that seen on Panther ausf A vehicles produced by MNH.

Demag Panthers. This pattern was made up of horizontal strokes applied with a trowel and separated by deep vertical lines. Some vehicles also featured horizontal lines which then formed a grid and this has led to the Demag patterns being incorrectly assumed to be a version of the MAN Zimmerit.

Many photographs exist of tanks coated in patterns which do not conform to those listed above and it is common to read of 'field applied' Zimmerit as a means of explaining the many anomalies. However, when one considers how complicated the process of covering a complete armoured vehicle was, requiring 160 kilograms of paste for a single Panther, with long waiting periods between each step and the use of a blowtorch with what was essentially a flammable compound, it seems likely that older or damaged tanks received their coating of Zimmerit when they were withdrawn from

the front for repairs at larger workshops far in the rear.

THE PANTHER-FIBEL

In any study of the Fanther tank some mention should be made of the rather lavishly produced operating manual which was issued to the individual members of the crew.

Introduced in mid-1944 the Panther-Fibel, or Panther primer, was designed to appeal to young soldiers through its use of often irreverent and sometimes risqué humour. The greater part of the text was presented in rhyme, which was thought to aid retention, and often related technical information to aspects of the men's everyday lives. For example, maintenance of the tank's tracks were likened to the care a soldier needed to show to his boots, without which he could not march to battle. Similarly, the engine's cooling system was compared to the benefit of adequate lubrication for a night on the town. An attractive young women, known as Erica, was never far away.

Despite the comical tone imparted by many of the illustrations and much of the text, the deadly serious messages that the manual was intended to hammer home were never far away and the lessons relating directly to survival in combat, such as the effective range of the 7.5cm gun, could be quite sombre.

The book itself was large, at over 100 pages, and was printed on good quality paper and featured a hardbound cover. Many have survived to the present day in good condition.

Panther-Fibel
A B C
D 655/27
Pantherpunsch
Der Panthermann wird davon blau
Wie's Äußre einer H. Dv.
Doch ihre innerliche Schlauheit
Erreicht er spielend in der Blauheit.
Er schwebt in höheren Regionen
Und ringsum wimmelt's von „Patronen"
Wenn er dann aus dem Rausch erwacht,
Ist ihm im Schlafe beigebracht,
Was unbedingt man wissen muß.
Parole:
Lerne mit Genuß!
PANTHER-KLINIK
Die Werkstatt ist nicht da zum Ruhn,
Sie kann nicht alles für Dich tun.
Sieh zu, daß Du Dich mitbetätigst.
Vor allem meld, was Du benötigst:
Dem Hauptwerkmeister mußt Du sagen,
Was alles fehlt an Deinem Wagen;
Dem Waffenmeister wird erzählt,
Wenn an der Spritze etwas fehlt;
Nachrichtenleute wollen wissen,
Ob sie am Funk was richten müssen.
Meld, ohne viel drumrum zu reden,
Ganz klar und deutlich alle Schäden.
Die Munition nimm raus zuerst,
Bevor Du in die Werkstatt fährst!
Dann räum heraus gleich Dein Gepäck,
Sagst ist es hinterher bloß weg. —
Ist mal ein Teil total am Schluß,
So daß man es ersetzen muß,
Dann wirf's nicht in den Straßengraben —
Der Herr Inspektor muß es haben;
Denn bringt das alte er zurück,
Kriegt er auch gleich ein neues Stück.
Auch darfst Du nie was andres treiben
Und mußt bei Deinem Wagen bleiben.
Weil manchmal selbst der Spezialist —
Was unumgänglich scheint — vergißt.
So ist, oft schon nach kurzer Zeit,
Dein Panther wieder kampfbereit!

The cover of the Panther-Fibel. The number D 655/27 written on the chalkboard, below the letters ABC, was the official designation of this manual.

Saint I Barbara, the patron saint of gunners, extols I the sleeping crewman to 'Lerne mit Genuss!', I or learn with pleasure. Note the pet black I panther. Interestingly, the modernity and I elegance of the Panzer uniform was subtly I stressed throughout the book.

Another page from the Panther-Fibel. This one likens the duties of the

maintenance sections to a thorough medical check. As mentioned above the text is presented In rhyme and the last line explains that just a small effort will make the panther ready for battle.

PRODUCT CONTACT LIST AND ACKNOWLEDGMENTS

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www.dragon-models.com

Tamiya Inc

Shizuoka City, Japan

www.tamiya.com

Trumpeter/Hobby Boss

NanLong Industrial Park, San Xiang,

ZhongShan, Guang Dong, China

www.trumpeter-china.com

www.hobbyboss.com

Academy Plastic Models

521-1, Yonghyeon-dong, Uljeongbu-si,

Gyeonggi-do, Korea

www.academy.co.kr

Hobby Fan/ AFV Club

6F ., No.183, Sec. 1, Datong Rd, Xizhi City,

Taipei County 221, Taiwan

www.hobbyfan.com

Royal Model

Via E. Montale, 19-95030 Pedara, Italy

www.royalmodel.com

Italeri S.p.A.

via Pradazzo 6/b,

40012 Calderara di Reno, Bologna, Italy

www.italeri.com

Takom

www.takom-world.com

Meng-Model

Galaxy Century Bldg., No. 3069 Caitian Rd.,

Futian Dist., Shenzhen, Guangdong, China

www.meng-model.com

Amusing Hobby

3-16-19 Ima, Kita-ku, Okayama, Japan

www.amusinghobby.com

Rye Field Models

www.ryefield-model.com

An almost non-existent website. I would recommend one of the on-line retailers.

Hauler

Jan Sobotka,

Moravská 38, 620 00 Brno,

Czech Republic

www.hauler.cz

Voyager

Room 501, No.4114th Village,

SPC Jinshan District, Shanghai 200540

P.R.China

www.voyagermodel.com

Griffon Model

Suite 501, Bldg 01, 418 Middle Longpan Rd,

Nanjing, China

www.griffonmodel.com

Aber

ul. Jalowcowa 15,40-750 Katowice, Poland

www.aber.net.pl

E.T. Model

www.etmodeller.com

Friulmodel

H 8142. Urhlda, Nefelejcs u. 2., Hungary

www.friulmodel.hu

Modelkasten

Chiyoda-ku Kanda, Nishiki-Cho 1-7, Tokyo,

Japan

www.modelkasten.com

Very difficult to navigate but worthwhile.

Airfix

www.airfix.com

Theodoras Kalamatas Modelling Worshop

www.facebook.com/Theodoros-Kalamatas-Modelling-Workshop

Eduard Model Accessories

Mirova 170, 435 21 Obrnice,

Czech Republic

www.eduard.com

Master Club

www.masterclub.ru

It appears that this firm is closely associated with Armour35, a Russsian mail-order firm.

Model Artisan Mori

Yasutsugu Mori,

Maison Suiryu 302, Kunoshiro-cho 1-10,

Yokkaichi-City, Mie 510-0072, Japan

www.artisanmori.web.fc2.com

Model Factory Hiro

Yubinbango 121-0063 Adachl-ku, Tokyo,

Hlgashlhokima 2-Chome, 3-8 Japan

www.modelfactoryhiro.com

RB Model

Powstancow Wlkp.29B,

64-360 Zbaszyn,

Poland

www.rbmodel.com

M Workshop Singapore

91 Bencoolen St, Sunshine Plaza 01-58,

Singapore

www.themworkshop.com

Zvezda (Zvezda-America)

www.zvezda-usa.com

Note that the Russian catalogue is not the same as the US version.

ROCHM Model

www.rochmmodel.com

rochmmodel@gmail.com

This company has a huge selection of parts and accessories for 1/35 scale Panther models.

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In writing this book I referred extensively to Germany's Panther, The Quest for Combat Supremacy written by the late Thomas L. Jentz with plan drawings by Hilary L. Doyle. Another Invaluable resource is Thomas Jentz's Panzertruppen books which I would recommend to any reader with an interest in German armour. For the unit histories I relied on Viking Panzer: The German SS 5th Tank Regiment in the East in World War II by Ewald Klapdor, Armor Battles of the Waffen SS by Will Fey and my own Viking Summer: 5.SS-Panzer-Division in Poland, 1944. I also relied heavily on the work of Martin Block and the late Ron Klages whose research on vehicle allocations would fill many volumes. I would like to thank the modellers who generously allowed meto publish the images of their work and I must make special mention of Roberto Reale of Royal Model, Sheng Hui of ROCHM, Jan Zdiarsky from Eduard Accessories and Freddie Leung of Dragon Models who all helped enormously. As always, I am indebted to Karl Berne, Valeri Polokov and J.Howard Parker for their invaluable assistance with the photographs and period insignia.

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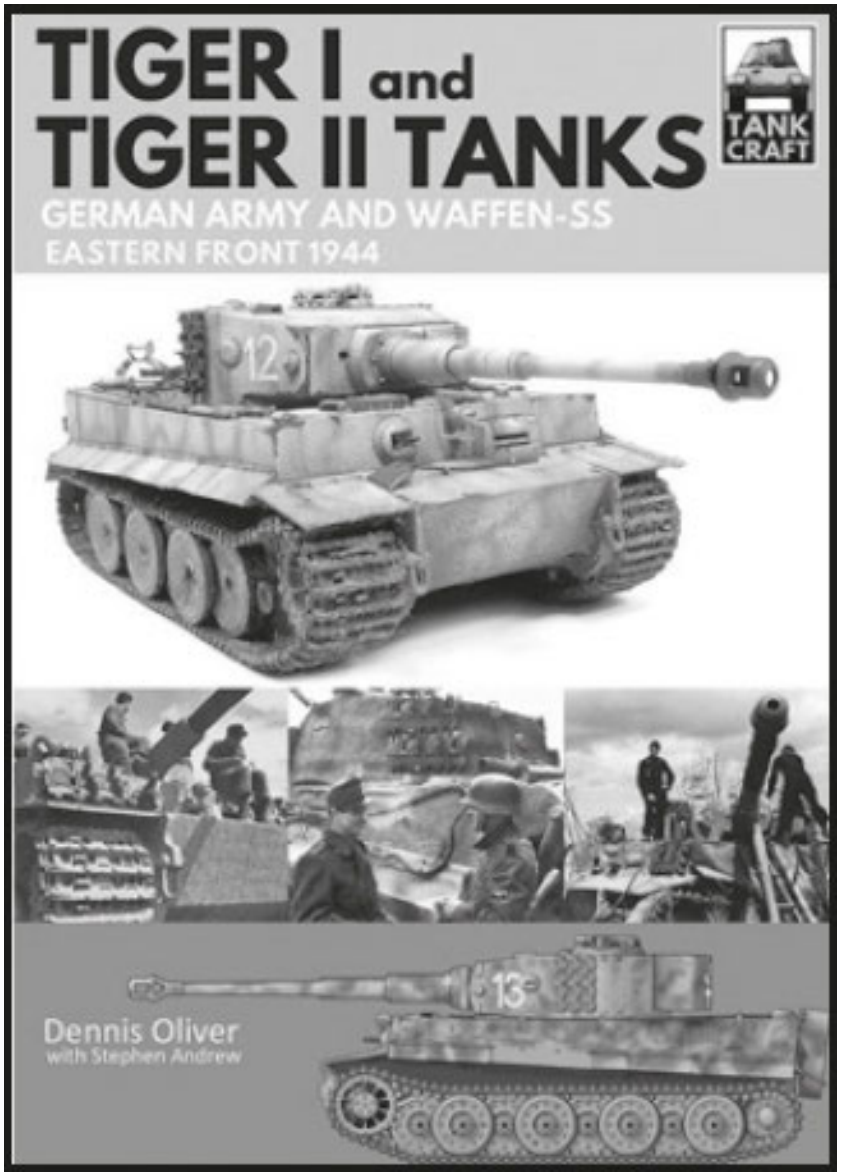
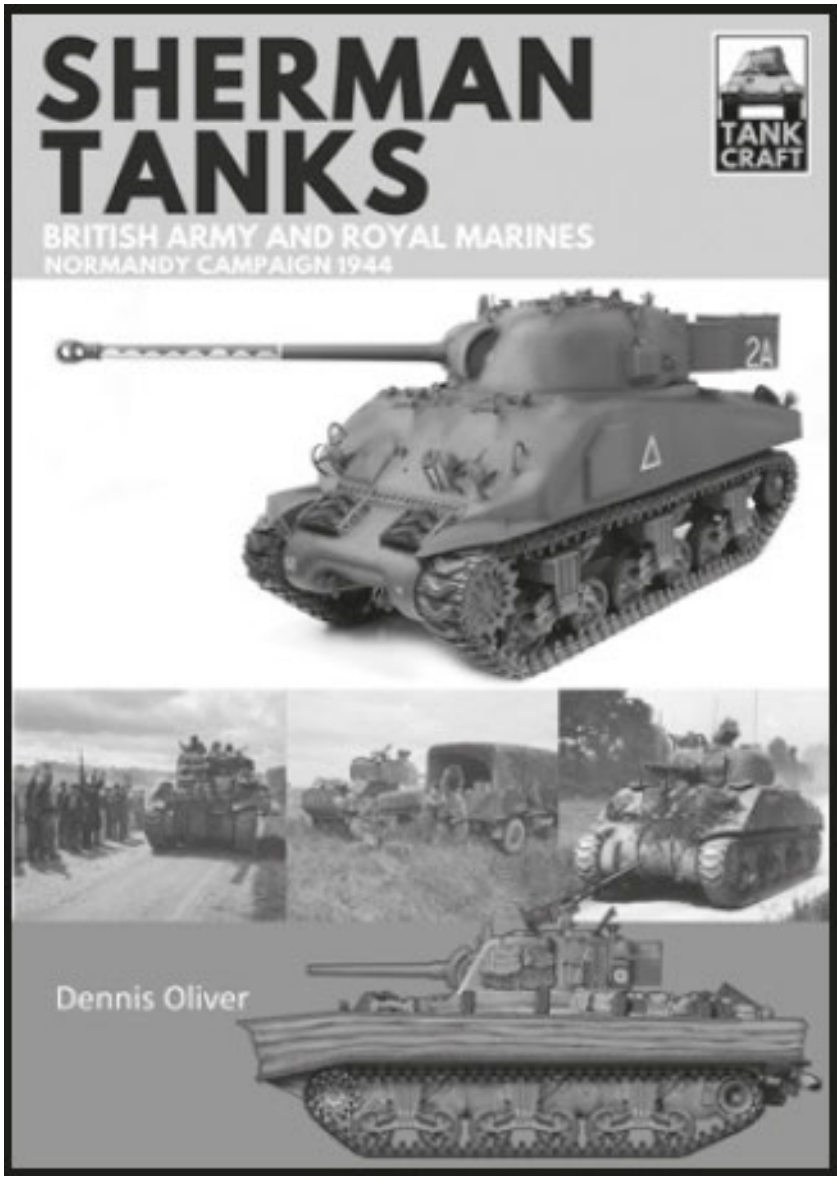
A Panther ausf G of 1. Kompanie, SS-Panzer-Regiment 3 disabled and abandoned during the fighting around Magyaralmas in Hungary. The method of application of Zimmerit would suggest that this vehicle was assembled by Daimler-Benz but it is difficult to be certain from this image alone. Most, if not all, the regiment's Panthers had lengths of spare track fitted to the turret sides by the time they reached Hungary. The company number is probably rendered in red with a white outline. Note the unusual position of the Balkenkreuz national insignia on the hull side and the non-standard rack on the engine deck, another feature commonly seen on the Panthers of this regiment in Hungary. The number 8 was applied by the Soviets.

The aim of these innovative series is to provide modelmakers and enthusiasts with a new standard of primarily visual reference to both the full-size vehicles and their models, using detailed line drawings, plans and photographs, many in full colour. Each book is devoted to a famous military vehicle – chosen for its popularity as a modelling subject – but will range from main battle tanks to 4x4s.



Tiger I and Tiger II: Tanks of the German Army and Waffen-SS

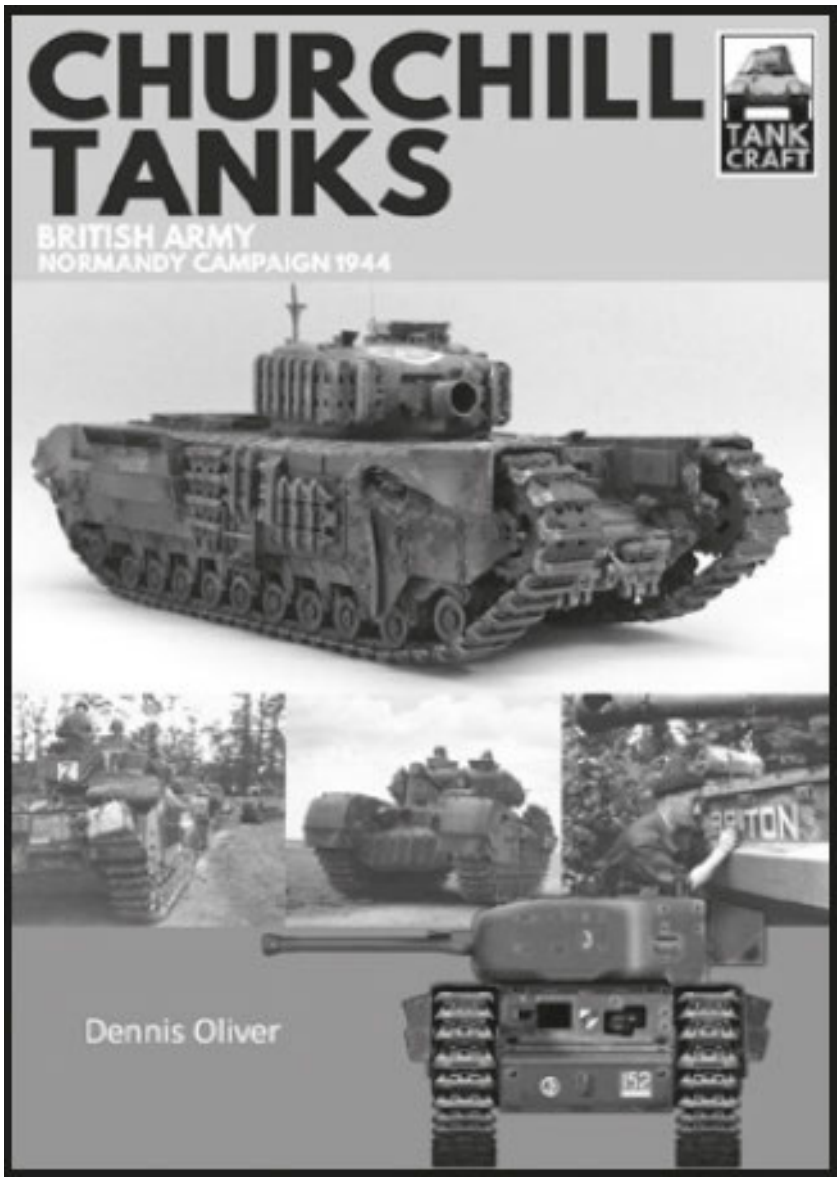
Eastern Front 1944



Sherman Tanks of the British Army and Royal

Marines

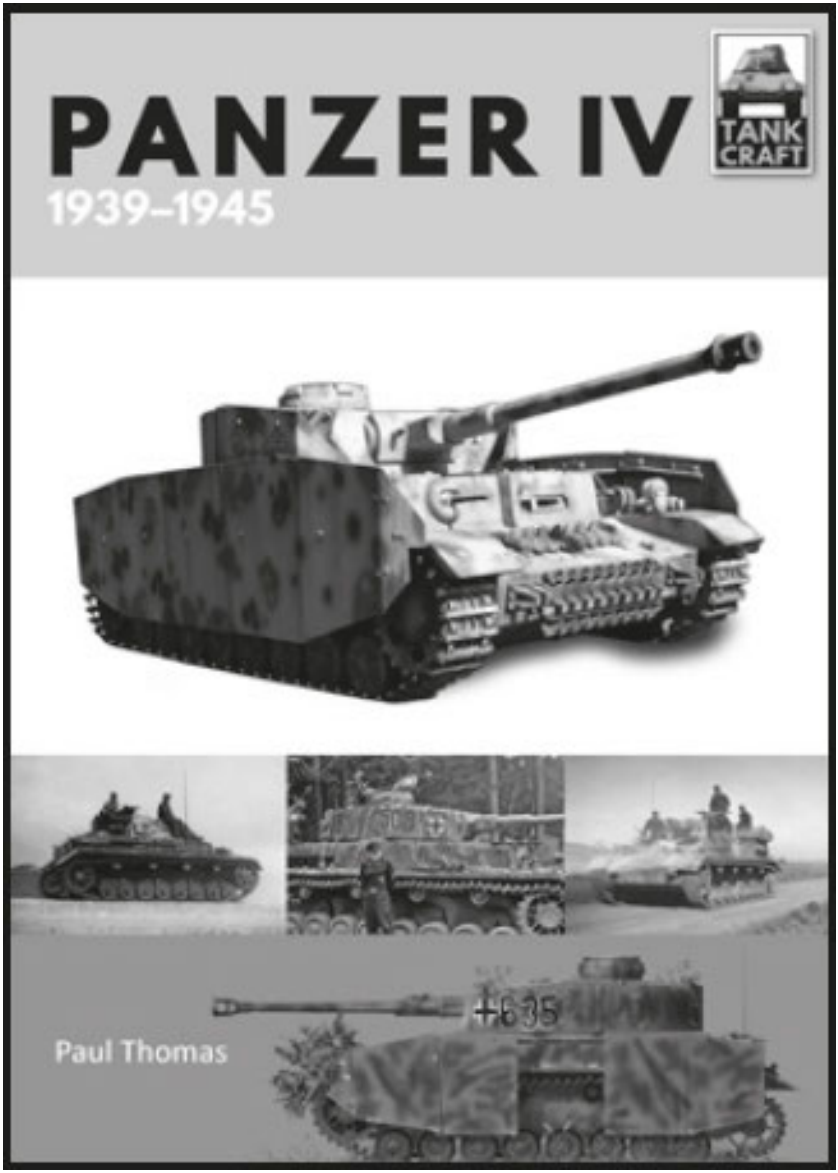
Normandy Campaign 1944



Panther Tanks

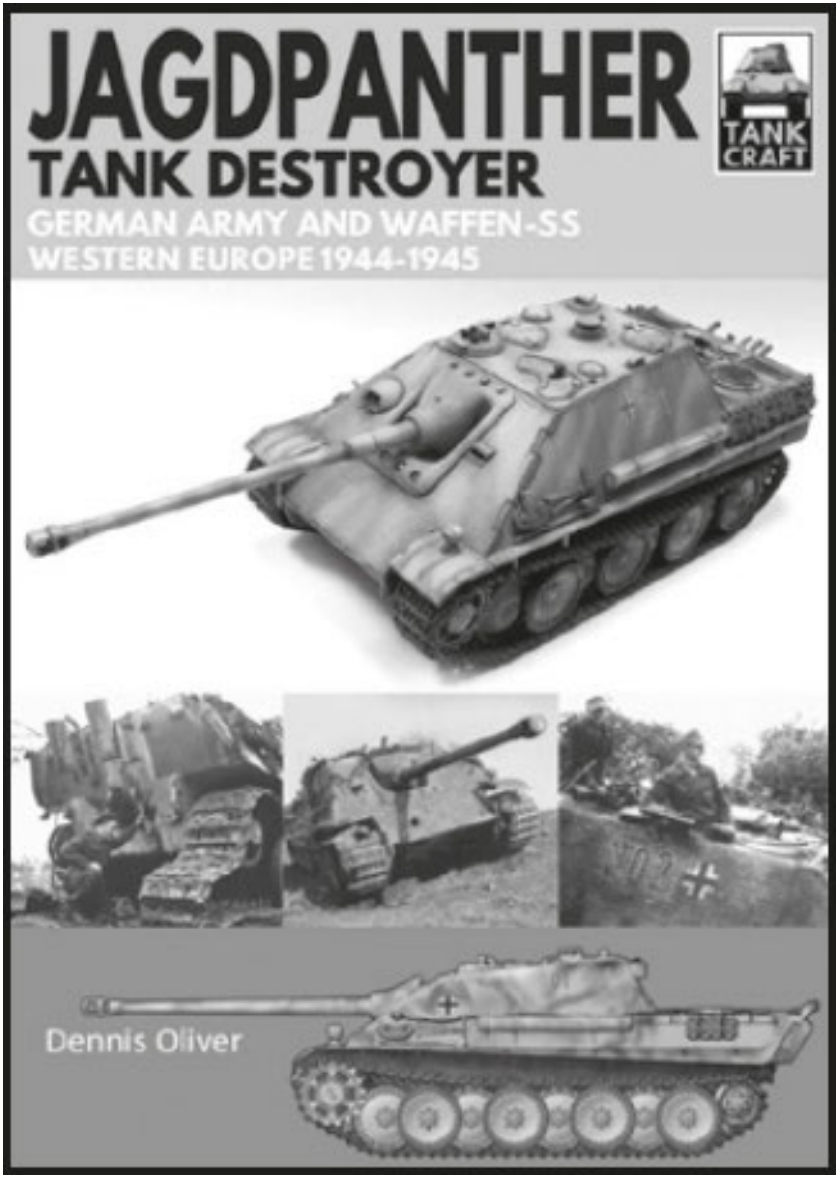
Germany Army and Waffen SS, Normandy

Campaign 1944



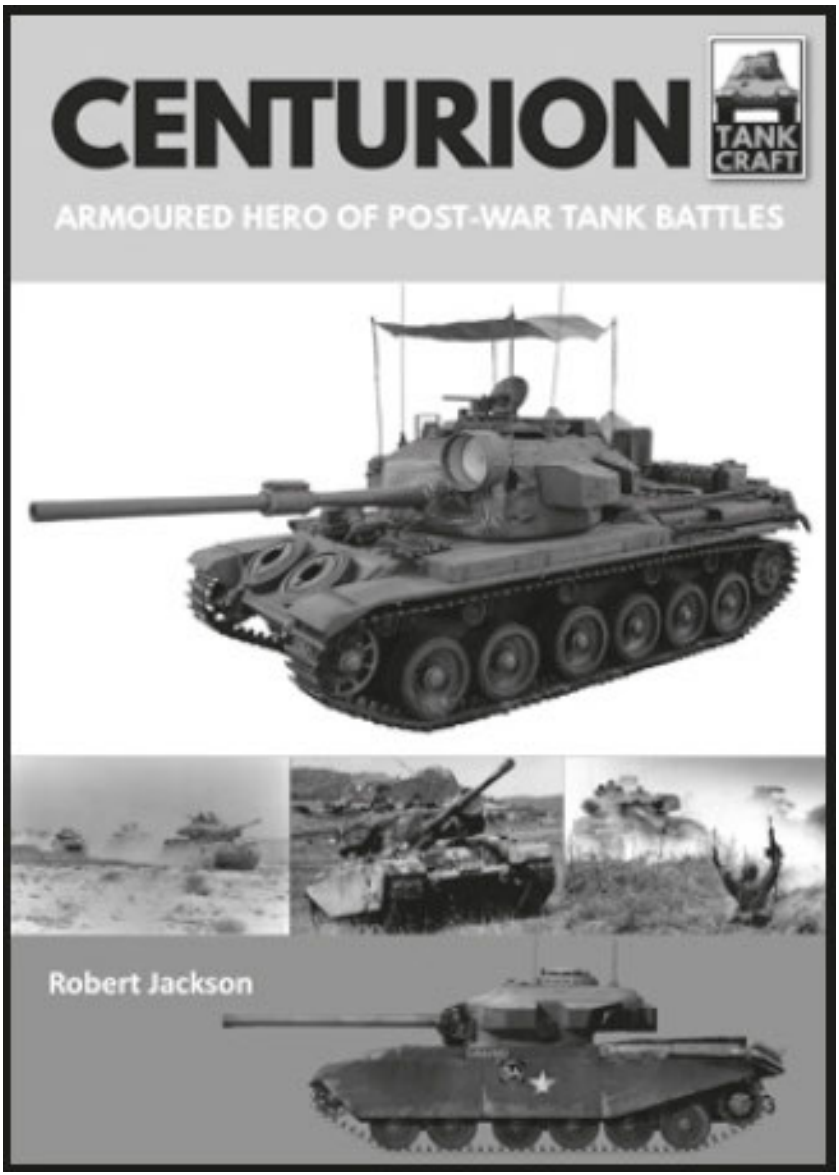
Churchill Tanks

British Army, North-West Europe 1944–45



Panzer IV

1939–1945



Jagdpanther Tank Destroyer

German Army and Waffen-SS, Western Europe 1944–1945

Panzer I & II

Blueprint for Blitzkrieg 1933–1941

T-34

Russia's Armoured Spearhead

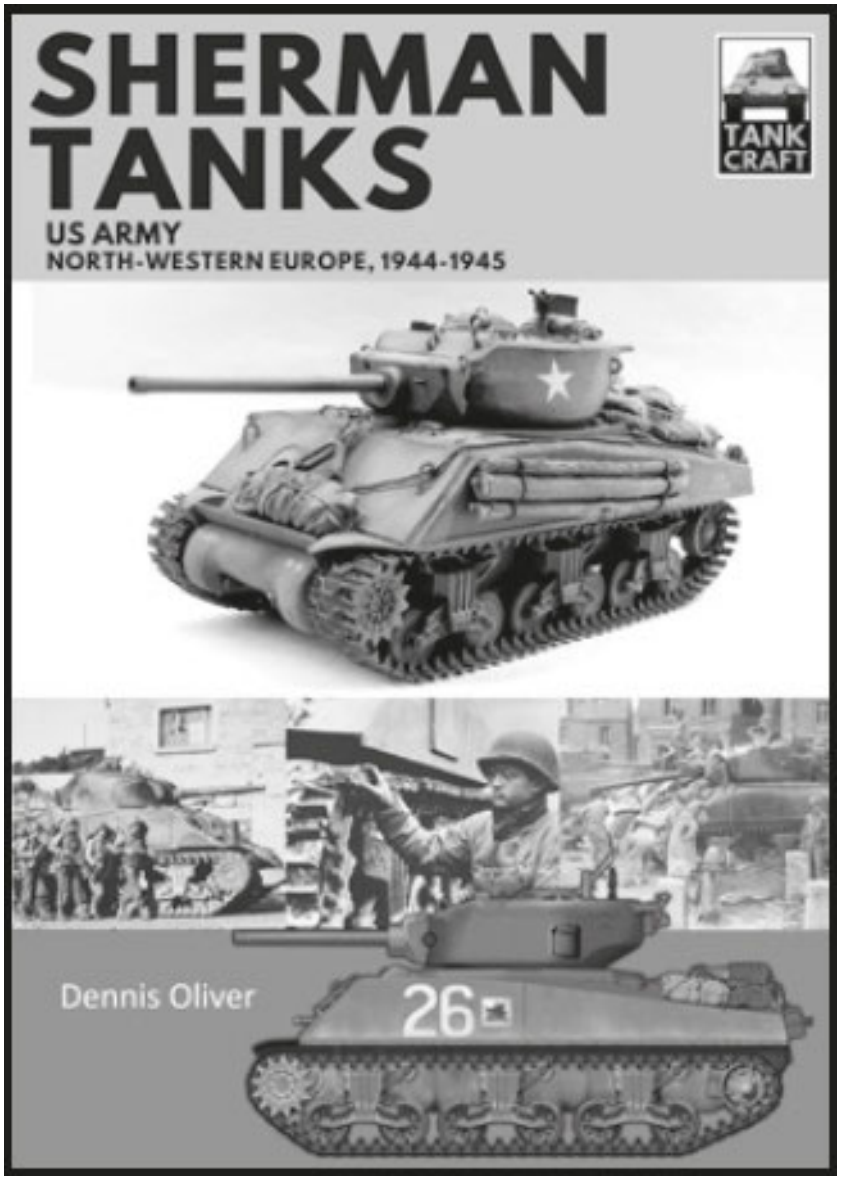
Tiger I

German Army Heavy Tank, Southern Front, North Africa, Sicily and Italy, 1942–1945

Cromwell and Centaur Tanks

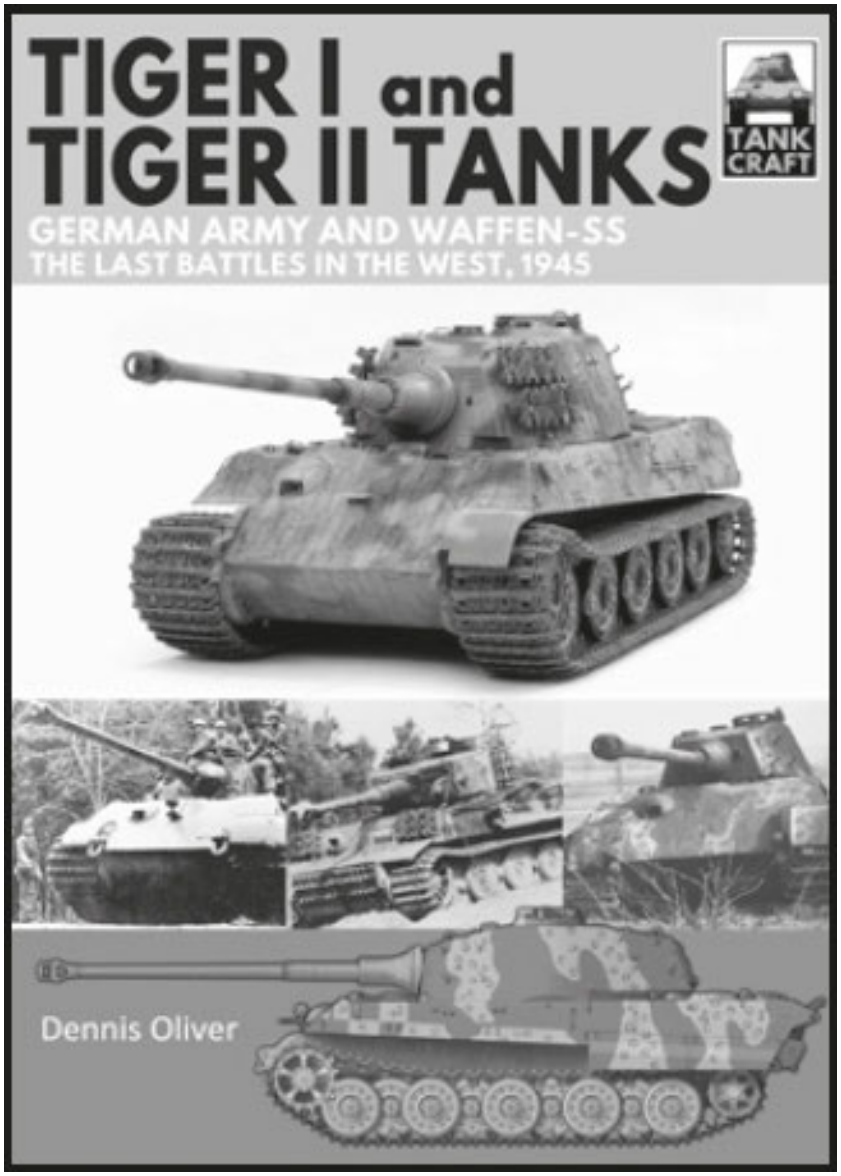
British Army and Royal Marines, North-west

Europe 1944–1945



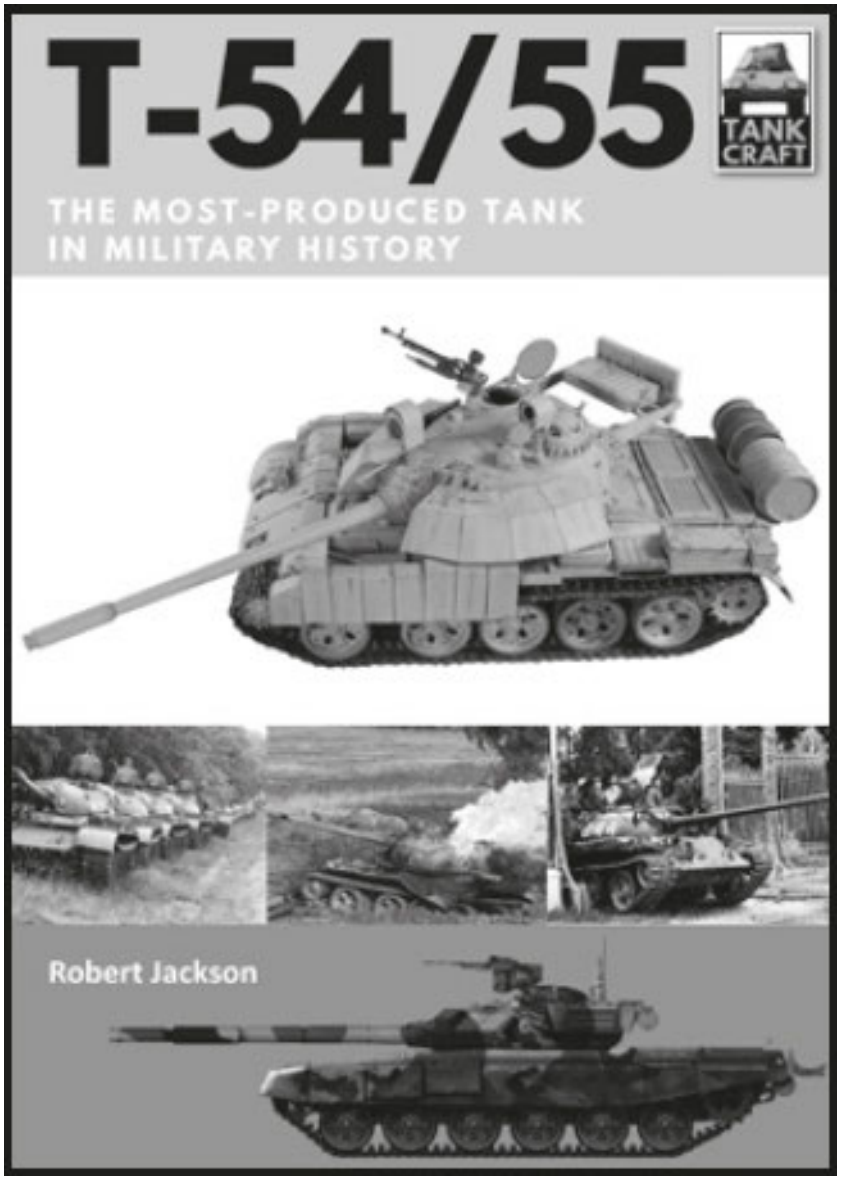
Centurion

Armoured Hero of Post-War Tank Battles

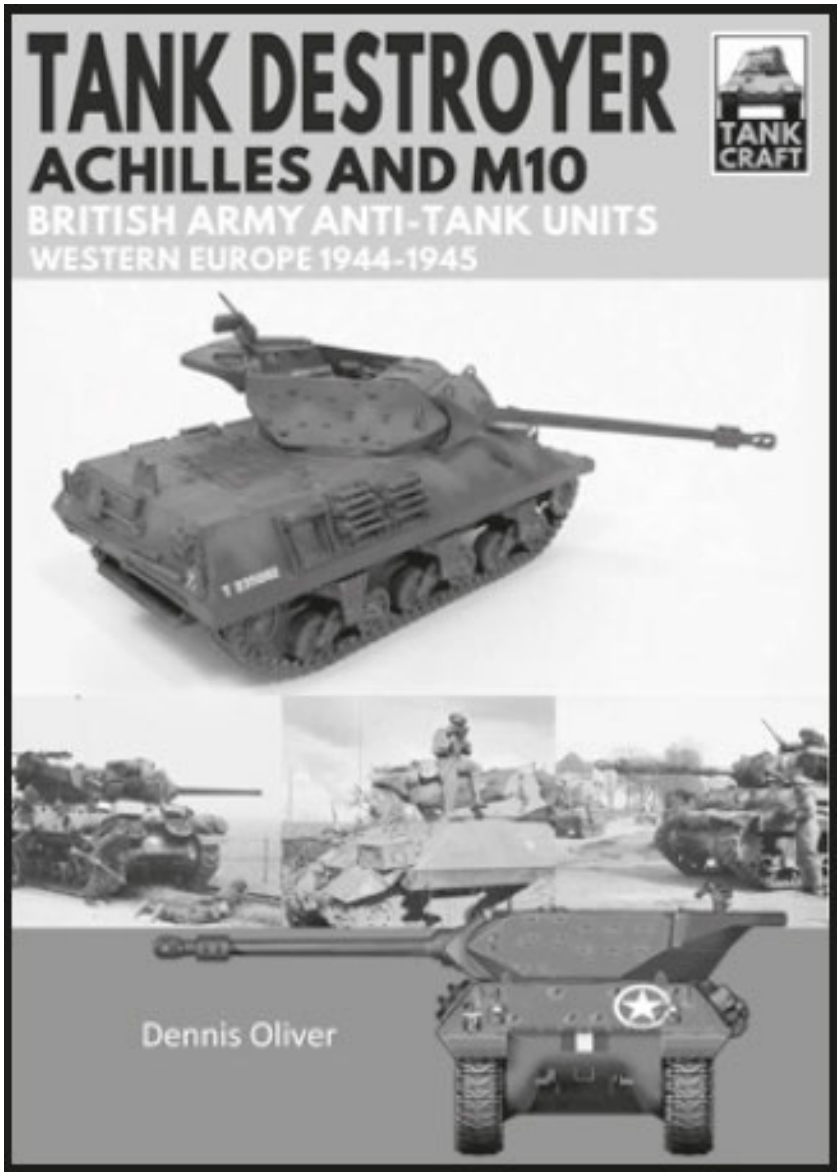


Sherman Tanks, US Army, North-Western

Europe, 1944–1945

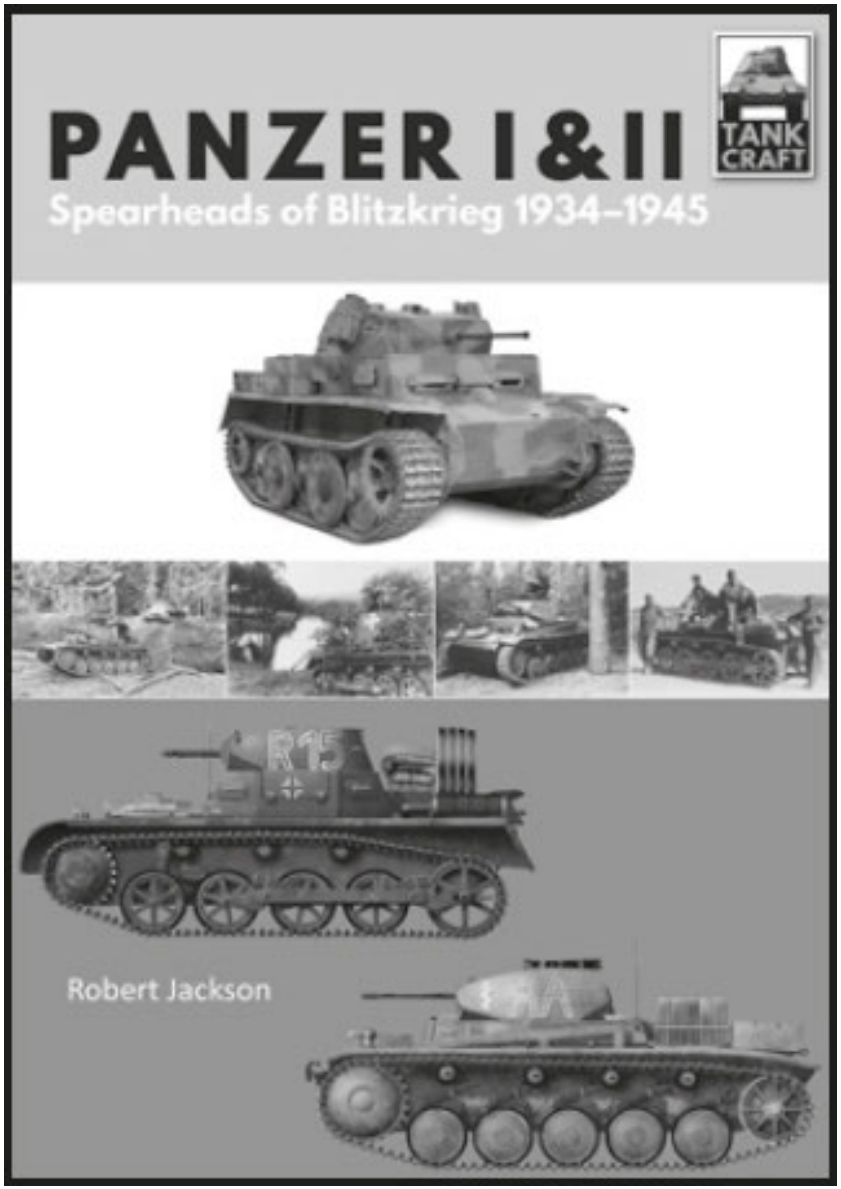


Tiger I and Tiger II Tanks, German Army and Waffen-SS, The Last Battles in the West, 1945



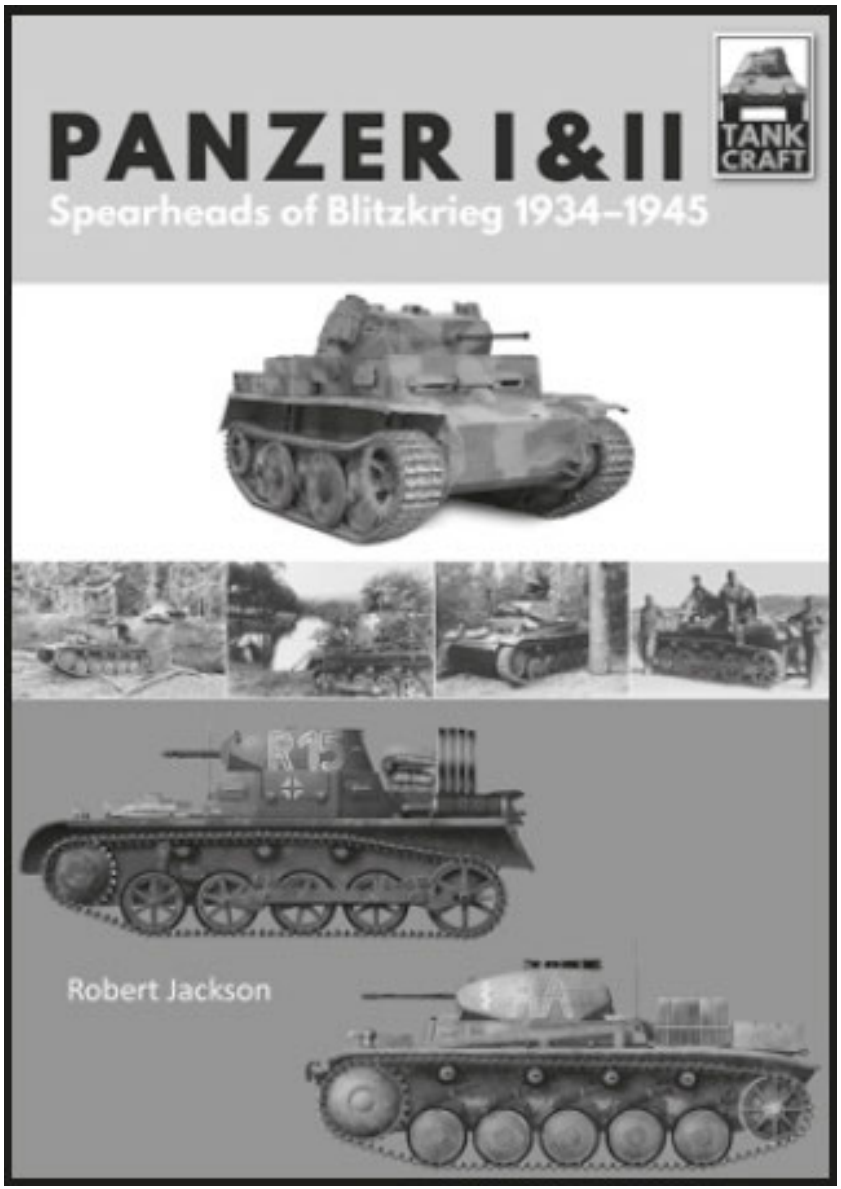
T-54/55

Soviet Cold War Main Battle Tank



Tank Destroyer

Achilles and M10, British Army Anti-Tank Units, Western Europe, 1944–1945



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Defence of the West, 1945

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British Cold War Main Battle Tank

Stug III and IV

German Army, Waffen-SS and Luftwaffe, Western Front, 1944-1945

Challenger 1

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Eastern Front, Summer 1943

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The US's Main Battle Tank in American and Foreign Service, 1981–2019

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Operation Barbarossa 1941

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Leopard 2

NATO's First Line of Defence, 1979–2020

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German Army and Waffen-SS Normandy Campaign 1944

Jagdpanzer IV: German Army and Waffen-SS Tank Destroyers

Western Front, 1944–1945

Tiger I and Tiger II Tanks

German Army and Waffen-SS The Last Battles in the East, 1945

Panther Medium Tank

IV. SS-Panzerkorps Eastern Front, 1944

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Dennis Oliver is the author of over twenty books on Second World War armoured vehicles including *Tiger I and II Tanks: German Army and Waffen-SS: Eastern Front 1944; Panther Tanks: German Army and Waffen-SS, Normandy Campaign 1944; Jagdpanther Tank Destroyer: German Army, Western Europe 1944-1945*; and *Tiger I and Tiger II Tanks:German Army and Waffen-SS, The Last Battles in the West, 1945.*

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From top to bottom. A Pzkpfw Panther ausf A of 5.Kompanie, SS-Panzer-Regiment 5 photographed in Poland during the summer of 1944. Another view of this vehicle is also shown on page 15 and also on page 25 of the Camouflage & Markings section of this book. A close-up view of the 1/35 scale model Panther ausf A built and painted by Theodoros Kalamatas. Other images of this model can be seen on page 30 of the Model Showcase section. The 1/35 scale Panther ausf A photo-etched brass detail set from Eduard Model Accessories. A Panther ausf A of 5.Kompanie, SS-Panzer-Regiment 5.

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